ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
IT DOCTORAL PROGRAM

TOWARD A THEORY OF INFORMATION SYSTEMS PARTNERSHIP SUCCESS

BY

TEMESGEN ABERA WESENI

MAY 2017
ADDIS ABABA, ETHIOPIA

TOWARD A THEORY OF INFORMATION SYSTEMS PARTNERSHIP SUCCESS

A DISSERTATION SUBMITTED TO

IT DOCTORAL PROGRAM

PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN INFORMATION TECHNOLOGY (WITH SPECIALIZATION IN INFORMATION SYSTEMS)

ADDIS ABABA UNIVERSITY
ADDIS ABABA, ETHIOPIA
MAY 2017

ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

This is to certify that the dissertation prepared by Temesgen Abera Weseni, entitled: *Toward a Theory of Information Systems Partnership Success* and submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in Information Technology (with specialization in Information Systems) compiles with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Examiner _____ Signature _____ Date _____

Examiner _____ Signature _____ Date _____

Supervisor _____ Signature _____ Date _____

Co-Supervisor _____ Signature _____ Date _____

_____

Chair of Department or Coordinator of the Research Track

Declaration

I declare that this dissertation is my original work and has not been submitted for any Degree in any other University. I have undertaken the study independently with full guidance and support of the research principal supervisor and co-supervisor.

Signature: _____

Temesgen Abera Weseni

This dissertation has been submitted for examination with my approval as a principal supervisor.

Signature: _____

Professor Dr. Richard T. Watson

Dedication

I dedicated this work to “myself”.

(*An orphanage child;*
a refuge kid;
a young man without a habitat;
and a migrant adult;
but a person with a big dream!).

Abstract

Due to multidimensional problems, nowadays Africans continue facing poor Public Information Service (PIS) which hindering their daily activities. To improve the Africans' delivery of vital electronic PIS, it requires the joint efforts of the private, public, and voluntary actors of various sectors. The question is, while this issue is observed in many African countries, including Ethiopia, how best to synergize the Public-Private Partnership (PPP) efforts continues to be a topic of ongoing debate. One of the issues is, how can academicians and practitioners accurately examine the Critical Success Factors (CSFs) of PPPs for feasible Information Systems Partnerships (ISPs) amongst private and public sectors envisioned for transforming the delivery of electronic public service to citizens?

Despite the high failure rate of Information System (IS) projects worldwide, especially in the third-world context, studies fail to provide plausible explanation how public agencies and private sectors should negotiate on alternative strategies such as PPPs amongst each other. Minimal attention is also given to evaluate how success factors of a partnership account for the IS projects success in the developing countries with no PPP laws such as Ethiopia. To this end, this study develops a theoretical framework (i.e., a Theory of IS Partnership Success) for a deeper understanding of the case. The study applies positivist qualitative research paradigm to extract the interdependent technical and multidimensional success factors that explain the degree of information asymmetry in order to determine a partnership success/failure.

Partnership is a complex process which requires frequent re-negotiations among an agent and a principal. The existence of any flaw during ISPs may potentially lead to information asymmetry and opens various gaps. Designed on a qualitative research methodology, the theoretical framework of this case study is based on Agency Theory. Systems Thinking approach which includes Soft Systems Methodology is also consulted as an analytical tool. The ongoing "Lehulu" (for-All) PPP is studied in Ethiopia. Lehulu is initiated by the Ethiopian Government after incorporating seven stakeholders (six public sector principals and a private agent). The data collection was conducted via interviews, indirect observations, and document analysis. Based on the findings of the study, three research propositions are developed to depict how both Technical and Multidimensional Critical Success Factors (i.e., TCSFs and MCSFs) impact the degree of information asymmetry and consequently influencing the Partnership Success. The research findings have both theoretical and practical implications for understanding the role, sustainability, and success of ISP under a PPP model for national PIS and ICT infrastructure transformation in developing economies. In sum, the research contributes to both IS and PPP fields.

Keywords: *Agency Theory, Information Asymmetry, Partnership Success, Public Information Service, Public-Private Partnership, Soft Systems Methodology.*

Acknowledgment

The researcher and his advisors would like to thank all participants and all contributors.

~Temesgen Abera Weseni, May 2017.

Acronyms

AAU	Addis Ababa University (Governmental)
BPR	Business Process Reengineering
BSC	Balance Score Card
CSC	Common Service Centers
CSF	Critical Success Factor
EBC	Ethiopian Broadcasting Corporation (Governmental)
EEU	Ethiopian Electric Utility (Governmental)
ETB	Ethiopian Birr (Local currency)
EthioTelecom	Ethiopian Telecommunication (Governmental)
e-Government	Electronic Government
e-Service	Electronic Service
GoE	Government of Ethiopia
GTP	Growth & Transformation Plan (National)
HR	Human Resource
ICT	Information and Communication Technology
ICT4D	Information and Technology Communication for Development
IP	Intellectual Property
IS	Information System(s)
ISD	Information System(s) Development
ISP	Information Systems Partnership
IT	Information Technology
ITP	Information Technology Partnership
KFT	Kifya Financial Technologies plc. (private company)
LDC	Low-income Developing Country
Lehulu	For-All (a local language translation)
LLDC	Landlocked Low-income Developing Country
MIS	Management Information System(s)
MCIT	Ministry of Communications and IT (Governmental)
MCSF	Multidimensional Critical Success Factor
MoFED	Ministry of Finance and Economic Development (Governmental)
m-Government	Mobile Government
m-Service	Mobile Service
PIS	Public Information Services
PPP	Public-Private Partnership
ROI	Return On Investment
RTA	Road and Transport Authority (Governmental)
SSM	Soft Systems Methodology
TCSF	Technical Critical Success Factor
U.S.A.	United States of America
UN	United Nations
WSA	Water and Sewerage Authority (Governmental)

Table of Contents

Table of Tables

Table of Figures

CHAPTER ONE

INTRODUCTION

This dissertation is a perspective in viewing the role and success of Public-Private Partnership (hereafter abbreviated as PPP) for the development of national Information Systems (IS) empowerment and Information Technology (IT) infrastructural development under a feasible Information Systems Partnership (hereafter abbreviated as ISP) in a third-world context. It is a study that reveals the importance of addressing Critical Success Factors (hereafter abbreviated as CSF) of a PPP while forming a national ISP under viable PPP models for transforming vital Public Information Service (hereafter abbreviated as PIS) infrastructures and achieves a sustainable *Partnership Success*. The empirical context of the research focuses on the overall implementation and development of a national PPP among the public (principal) and the private (agent) sectors in one low-income third-world country, namely Ethiopia. The newly designed national ISP initiative (i.e., Lehulu PPP) has also implication for future realistic technology and IS partnerships.

In this introductory chapter of the dissertation, background of the study, statement of the problem, the research context, the research question, objective of the research, scope of the research, and organization of the research are discussed. Issues related to the theoretical foundation and contributions of this research are also highlighted.

1.1 Background of the Study

The broad definition of information systems is a set of entities and shared patterns that enable goal attainment through the processing of information (Watson, 2014). Africans created the world's first major information system, gesturing and language (Watson, 2013). However, due to multidimensional problems, nowadays Africans continue facing poor PIS which hindering their daily activities. To improve the Africans' delivery of vital public service, it requires the joint effort of the private, public, and voluntary actors of various sectors. The question is, while this issue is observed in many African countries, including Ethiopia, how best to combine those efforts continues to be a topic of ongoing debate. One

of the issues is, how can academicians and practitioners accurately evaluate the role and success of ISP under a PPP model for transforming poor governmental-based public service into electronic PIS delivery to citizens? Answering such multifaceted question is not easy.

Traditionally, the role of information systems has been to design, build, and install systems to improve organizational performances, as today information systems need to look beyond systems building (Watson et al., 1998). Following such a strong remark, a number of information systems and ICT studies attempting to define and theorize the best way to deliver information services to the public, though these efforts have been partly satisfactory or totally ignore the role of ISPs among governmental actors and the private sector entrepreneurs.

The terms IS and IT are used interchangeably in various literature but one may find different definitions for both terms which some of them may usually overlapping. For instance, Van Belle (2009) defined IT, IS, and ICT as:

> *ICTs (Information and Communication Technologies) cover any computer-based technologies used for digital information manipulation and communication although, technically, this also includes telephone and similar technologies. Sometimes "IT" (Information Technology) is used to refer to the computer-related technologies and "IS" (Information Systems) to the combination of computer-based systems (this includes the software applications as well as data and human resources).*

Other authors (for e.g., Alter, 2000; Piccoli, 2012; Iivari, 2005; Flowerday and Von Solms, 2005) have also defined IS in various contexts with related perspectives. IS defined as a system in which human participants perform business processes using information, hardware and software to capture, transmit, store, retrieve, manipulate and/or display information for internal or external customers (Alter, 2000). Further, IS defined as a computer-based system that provides its users with information on specified topics in a certain organizational context (Iivari, 2005). As majority of organizations today are totally dependent on their information assets, in most cases stored, processed and communicated within IS in digital format; and these IS are enabled by modern ICT (Flowerday and Von Solms, 2005). Moreover, IS is defined as formal, socio-technical, organizational systems

designed to process, store, and distribute information (Piccoli, 2012). Accordingly, in this study the term *information systems* is adopted to refer to IS as systems which provide its users with information on specified topics in a certain organizational context and consists of hardware, software, communication software, data or information, people or participants and procedures or work process.

The public sector is expected to satisfy social pressures or the local needs of service provision (Klijn and Teisman, 2000). In this regard, PIS delivery is the use of technology to enhance access to and efficiently deliver government information and services (Brown and Brudney, 2001). It incorporates an implementation of cost effective models for citizens, industry, employees, and other stakeholders (Whitson and Davis, 2001). Electronic Government (e-Government) and Electronic Services (e-Services), for instance, are increasingly replacing the traditional means of accessing vital public service via personal visits, phone calls, and mail delivery with new dimensions such as: online information tools, electronic services like searchable databases or text messaging services, outlines of privacy and security policies, foreign language and disability access, and public outreach based on the variety of features such as e-mail or search functions that help citizens contact government officials and utilize information on web sites (West, 2005). In short, PIS is a fully-fledged information system, which can use ICT as a tool to achieve better government (Davies, 2015; Bhatnagar, 2014; Alshehri and Drew, 2010; Ogbomo and Ogbomo, 2008).

Governments have the difficult task of protecting the public's interest while meeting the diverse needs of their constituents because citizens' expectations continue to rise as they demand more and better government services at lower costs (NASCIO, 2006). As the relationships between governments, their customers (other governments, business, and citizens), and their suppliers (other governments, business, and citizens) count on the use of electronic means (Means and Schneider, 2000), electronic services have become governments' priority (Harfouche and Kalika, 2009).

Nowadays, governments are no longer considered the sole provider of public works and services because of the forces driving this movement such as scarcity of public resources, a

political trend toward the deregulation of infrastructure, and an expansion of global markets (Ababutain, 2002). In this regard, the involvement of the private sector could also be a means of introducing and transferring new technology which is especially important in developing economies (Blaiklock, 2003).

Partnerships in which public services are provided using private infrastructure are increasingly common in low and lower-middle income economies where many people cannot afford or do not have access to the Internet (UNPAN, 2012). To keep pace with the global gradual trends, nowadays developing economy governments are focusing on PPPs as an alternative strategy to tackle absolute poverty and promote ICT infrastructure development. Although, a PPP is not easy to apply (Boeva and Vassileva, 2008), development of PPP is an alternative method of implementing public sector infrastructure projects as part of the government's role of promoting sustainable economic development where government allows the participation of the private sector in developing and implementing an infrastructure business through carefully integrating environmental, economic, and social needs to achieve both an increased standard of living in the short term, and net gains for future generations (Rashed et. al., 2011).

Hart, who is one of the 2016 Nobel prize award winners, defined PPP as the government contracts with a private party - *the builder* - to build and run a public service specifically the government contracts with the builder to build the public service and then later on with another (private) party to run it (Hart, 2003). PPPs should be seen as a vehicle for governments to develop infrastructure projects by transferring all the risks to the private sector and thus shedding of many of the government's responsibilities (Zhang, 2005). In essence, a PPP approach can have a strong positive effect on the economic life of any country (Montanheiro, 2008). The effect of synergy (in partnership) can be put into a metaphorical formula: 1 (public) + 1 (private) > 2 (Wang, 2009). A successful partnership between the public and private sectors depends on all the people involved with the project (NASCIO, 2006). There are three main reasons for adopting ISP under a PPP approach. Firstly, the private sector possesses better mobility than the public sector and therefore the private sector is not only able to save the costs of project in planning, design, construction

and operation, but also avoid the bureaucracy and relieves the administrative burden. Secondly, there is a widespread belief that the private sector can provide better service than the public sector and establish an effective PPP so that a balanced risk-return structure can be maintained. And lastly, governments' inability to raise massive funds for large-scale infrastructure projects can be mitigated by private participation (Cheung et al., 2009).

On the other hand, partnerships with the public sector allow some risks to be transferred to the private sector and hence to the parties best able to manage projects which will result in gains in performance and productivity (Zou et al., 2008). Although it is argued that the private sector is less concerned in equity and transparency than is the public sector (Rosenaue, 1999), some research underlines that ISPs under PPPs involve various kinds of risks that may emerge at different stages and life cycle of electronic transformation initiative such as ICT projects. For example, since private finance initiatives do not automatically lead to successful infrastructure projects, partners expect to identify five critical success factors, namely: favorable investment environment; economic viability; reliable concessionaire with technical strength; sound financial package; and appropriate risk allocation via reliable contractual arrangements (Zhang, 2005).

Reasons for project failure of PPP projects are rather unexplored (Marschollek, et al., 2010). The past decade shows an emerging trend under which the paradigm shifts and researcher interest is gradually directed at the place of the State as partner, regulator, and legislator on and of PPP issues (Boeva and Vassileva, 2008). Therefore, it is important for scholars and practitioners to better understand what a government is really looking for in a partnership before designing an assessment study (Wang, 2009). Because if such issues failed to be addressed early in partnership negotiations and agreements, an imbalance in the skills and expertise of the different parties involved can lead to the undermining of one party's interest and result in the failure to achieve equitable outcomes (Miraftab, 2004). Correspondingly, unfair ISP agreement decisions may also be indirectly associated with high degree of potential information asymmetry, which could result in creating a joint disadvantage for both parties rather than establishing a win-win scenario. Such differences might possibly be the effect of a bilateral information gap, lack of organizational capacity, and knowledge gap.

Since information asymmetry is frequently bilateral, which means that both parties hold information that the other party lacks (Dawson et al., 2016), opportunistic behavior (either ex-ante or ex-post facto) may often manifest itself among partners. For instance, if lack of transparency exists in the details of the partnership arrangement and negotiations, then both partners might seek benefits from the asymmetry. While trust provides the space for creative solutions it is vulnerable to misrepresentation, asymmetric information and opportunism (Klijn and Teisman, 2000). As a result, if the risk of opportunism is high, organizations tend to divert considerable resources to control and monitor for it (Wathne and Heide, 2000).

Generally, prior research in the context of PPPs has mainly focused on organizational and risk management aspects, but recent works concentrate on the explanation of the relationship between public and private partners and the success factors for these relations (Marschollek et al., 2010). For instance, a number of articles pointed out issues that are crucial to a systematic assessment of PPPs but the following are still missing from existing empirical studies (Wang, 2009).

- Lack of comprehensive data on PPPs projects;
- Lack of economic or financial evaluation prior to partnerships;
- Lack of knowledge about how to efficiently and effectively transfer risk;
- Lack of consideration for public interest and consumer protection; and
- Lack of information on comparative public projects for benchmarking PPP projects.

Besides the areas covered in related research, most PPP research has mainly concentrated on organizational aspects (Reijniers, 1994), on the comparative advantage of the public and the private sectors in order to optimize the delivery of public services (Rosenaue, 1999), on infrastructural projects like collaboration governance (Sharma, 2007), and on risk management approaches (Ng and Loosemore, 2007). Comparatively, the latest works also concentrate on the explanation of the relationship between public and private partners (Smyth and Edkins, 2007) and success factors for these relations (Jacobsen and Choi, 2008). As effective public–private sector collaboration is often born out of necessity (NASCIO, 2006), open communication and fostering mutual understanding may help to establish trust

between the parties and prevent frustration (Marschollek et al., 2010). However, some fail to depict clearly what should be the effectiveness criteria for such partnerships (Wang, 2009).

Another issue that deserves more academic attention is how actors measure the effectiveness of ISPs under PPP models. In favor of PPPs, some researchers put forward the advantages which include cost reduction (Domberger and Jensen, 1997), access to private resources (Reeves, 2003), and risk sharing (Skelcher, 2005). In the event where the effectiveness of PPPs is uncertain, examining a number of factors is necessary to allow successful PPP development. Some of the hindrances are intrinsic to the concept itself (Boeva and Vassileva, 2008) as an effective ISP often means different understanding to different people. For example, a private contractor may deliver cheaper public services by cutting employee wages (Wang, 2009). Consequently, there are significant variations in different PPP models with their own limitations and best practices (Rashed et. al., 2011).

In past literature, it has been stated that the success of public-private collaboration comprises more than designing an explicit contract and dealing with legal restrictions (Grimsey et al. 2002). For example, research conducted on United Arab Emirates' PPP concludes that political support is the most critical factor, while lack of appropriate knowledge and skills of the consortia leads to project failure (Dulaimi et al., 2010). Likewise, other research also argues that the challenge for practitioners in a PPP megaproject context is to establish and maintain a 'healthy' psychological contract and foster the development of mutual trust in the relationship (Marschollek et al., 2010).

In sum, PPP projects should be based on a public–private win–win principle (Zhang, 2005). It is under this premise that this study was designed to contribute to the ISP and PPP body of knowledge in general and the realization of ICT infrastructural development in particular. This ISP research is also designed in a way to surface the critical success factors of a PPP in order to deliver quality ICT service and electronic PIS in low-income economies environment. In order to help the ISP partners to ensure their agreement is based on a win-win PPP contracts, it could be mandatory to conduct extensive systems-based studies to identify critical factors of their PPP to potentially constrain the effect of information

asymmetry which could directly impact the sustainability, continuity, and success of their ISP and further ICT projects specifically in the Ethiopian context where the absence of its national PPP legal regulation is obstructing potential ISPs.

1.2 The Context

Recognizing officially the Ethiopians national poor PIS and public infrastructure was not that easy for previous Ethiopian governments. The current Ethiopian public sector arrangement and their organizational structures are somehow related with the country's long history. Ethiopia is the oldest independent country in Africa that never gave up its hand for colonization, except the historical five years Italian occupation/invasion partly from 1936 to 1941. With all the westerners' foreign colonization interests before and after the Italian attempt of colonization for about five years (1936 - 1941), there had been an influence to introduce a modern way of public service delivery in the Ethiopian basic public sector. Gradually, various Ethiopian governments (i.e., the Imperial era and the Socialist Military Junta era) have tried to change the delivery form and contents of the Ethiopian basic public service at various times. However, reforming the poorly structured Ethiopian information systems and the delivery of public service has been not that easy for generations due to socio-political factors.

Extreme poverty reduction, improving civil service systems using IT, and transformation of vital public services are among the current critical issues of low-income countries. Ethiopia, one of the multidimensional poorest economies in the world and a landlocked country, is striving to fulfill the standards set under the United Nation's Sustainable Development Goals (SDG) and specifically its own five years (2016-2020) Growth and Transformation Plan II (GTP-II). In such a populated country with very scarce ICT infrastructure, poor Internet services, monopolized telecom resources, and lack of ICT knowhow, in order to address challenging issues related to quality of public service information systems, the Government of Ethiopia is currently giving due attention to address such absolute/extreme poverty by considering ISP strategies under PPP models for its national public service. For example, the Ethiopian Federal Ministry of Communication and Information Technology

(MCIT) clearly recognizes the role of PPPs in delivering PIS by establishing smooth relationships with the private sector ICT firms and international information systems vendors (PwC, 2011).

Though private firms are more likely to allocate resources more efficiently and effectively than in a bureaucratic monopoly (Pass et al., 2000), the Ethiopian telecom infrastructure is still under the monopoly of the state. Following the gradually growing demand for the acceleration of ICT infrastructural development and the improvement of public service delivery in Ethiopia, considerations of PPPs as a model for public service development and information service delivery is increasing. Although various underlying benefits of such arrangements have been enumerated and continue under the consideration of the Ethiopian government, there is no national PPP regulatory framework which helps the State and its actors to select and manage the right PPPs for the prioritized ISPs. The primary possible barrier that exhibited and publically known is the politically incorrect level of caution and negative mindset within the public sector toward the local private ICT sector entrepreneurs/investors and vice versa. For instance, one study concludes that there is political pressure to ensure that PPP projects do not compare unfavorably to the traditional projects and cost to the taxpayers (Gunnigan and Eaton, 2008).

In order to achieve the sustainable development of Ethiopia and address the gradually growing demand for national electronic PIS and ICT infrastructural development, the role of the private sector under a viable PPP model may be seriously vital. The Ethiopian Government has recognized the power of ICT in the national development plan and this is indicated by ratification of the National ICT Policy and the setup of a new Institution at a Ministry level to lead the ICT sector, as well as allocating sufficient resources for ICT development (Debretsion, 2012). Since the Ethiopian "e-Government Strategy and Implementation Plan" released in 2011 (see Figure 1-1), the government has started to build up major public services with a collaboration of the private sectors using PPP strategies for selected critical e-Services enablement. According to the plan, through the implementation of twelve Agencies' priority projects and through four alternate channels of services delivery, the State expected to facilitate the creation of sustainable information systems ecosystem (PwC, 2011).

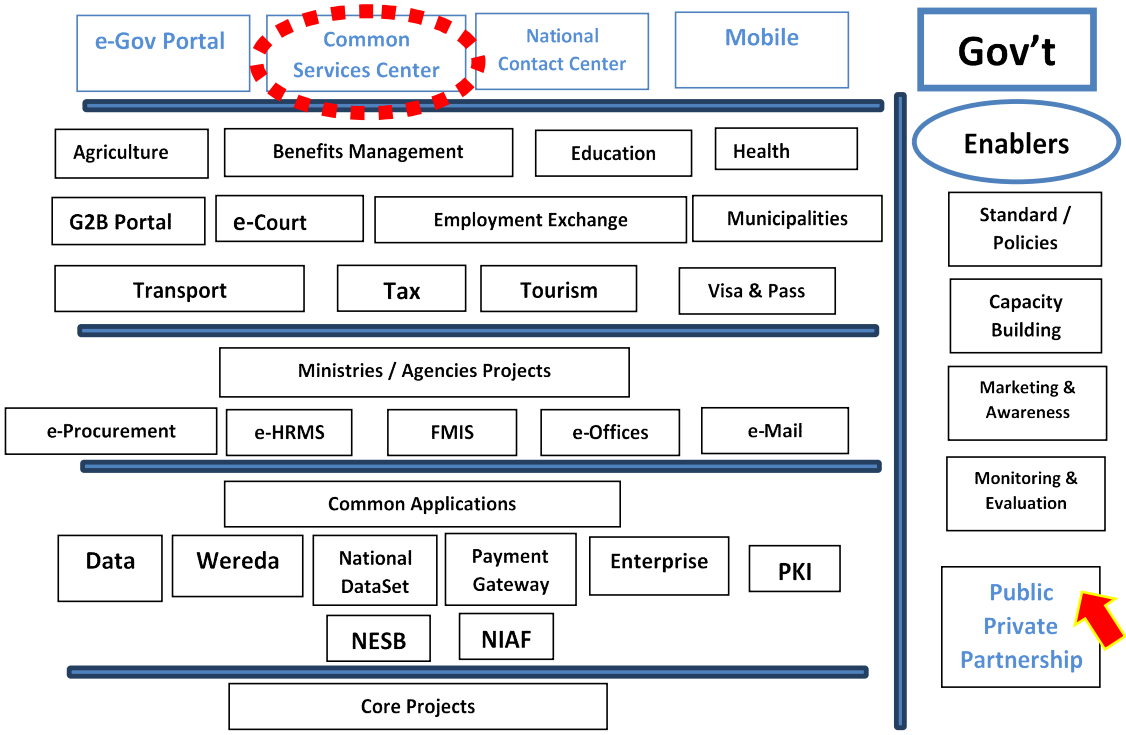

Figure 1-1: The Electronic Service Strategy of Ethiopia (PwC, 2011)

With all such PPP efforts the Ethiopian e-Services are still not as strong as expected. For example, according to the United Nations' 2014 global index survey of e-Government development, Ethiopia is ranked at 157th place which categorizing the country as one of the poorly performing Landlocked Low-income Developing Countries (LLDCs) in overall e-Government development endeavors (GSMA, 2015). This figure is relatively low score even among some other east African countries such as Uganda and Rwanda.

As far as the existing Ethiopian PIS delivery is concerned, the presence and background of basic civil services in most parts of this country exist as manual and underperforming. Even if there is a growing recognition about the role of PPPs among the public actors, the majority of Ethiopian public sector service providers in general lag behind forming vital partnerships with the private sector. Understandably, the current status of different agencies and utility service providers appears to be lacking proper experience and knowledge to trigger a PPP initiative for information systems transformation and ICT infrastructure

development. Therefore, it is timely to examine the PPP factors under an ISP endeavors for the delivery of national electronic PIS and public infrastructure development in Ethiopia.

The other concern in the Ethiopian context is that although the business climate of the country at the first glance looks like an attractive spot for investing in the ICT sector, the readiness of the public sector for establishing partnerships with the private sector seems premature and underdeveloped. Although some exemplar initiation of ISP under PPP is ongoing such as the current newly initiated service called *Lehulu (For-All),* which is a network of centers providing a Unified Billing System that allows one to pay all utility bills (Electricity, Water, TV, Traffic Ticket, and Landline phone) by merging the previous five public service payment into one-window, still poor quality information service and poor ICT infrastructures are observable in many parts of the public sector of the country. Above all, the local telecom and other ICT industries are found unquestionably in their infant stages of development for establishing any type of partnership with the private sector due to political, social, cultural, and economic factors. This calls for an extensive study which aims to come up with valuable potential contributions to promote ISPs and PPPs in general and public infrastructure development in particular in Ethiopia.

1.3 Statement of the Problem

Unfortunately, information systems projects fail in developing economies either partially or totally due to lack of commitment on the part of public managers and political leadership (Bhatnagar, 2000), scalability and sustainability challenges (Braa et al., 2004), or neglect of the conditions for sustainability (Walsham and Sahay, 2006). Moreover, government decision makers are typically less supportive of large ICT investments (Stowers, 2001). If this trend continues, developing economies will face major crisis in transforming governmental services as more projects will not be practical or last for reasonably long periods of time (Dada, 2006).

Nowadays, ICT solutions to developing economies problems require a joint effort of the private, public, and voluntary actors of various sectors. How best to combine and sustain those efforts could also be a topic of research, discussion, and debate. In this regard,

developing economies that can't effectively manage their information resources, mainly because of their public system failure to fill the gaps of basic public information service and poor ICT infrastructure, should persist with conventional manual civil service database systems. In such scenarios, addressing partnership challenges between actors as well as taking advantages of the PPP models for effective ISP formation opportunities calls for extensive research.

As a collective result of grossly inadequate public ICT infrastructures of the developing economies, the role of the private sector allied with the public sector for the delivery of governmental information service is becoming crucial for the improvement of basic civil service for its citizens. PPPs are contractual arrangements between the public and private sectors for delivering public use infrastructure projects efficiently and in a manner that reduces costs to the end users (Markab Advisory, 2012). In broader terms, PPPs can bring greater efficiency in the delivery of services, augment limited government budgets, and support from development financing institutions, and bring clarity and objectivity to price/costs and operations, on the other hand, PPPs cannot replace the public sector or regulator, nor operate without reasonable profit for private sector and sustainability for the public, nor exist in the absence of political will in a country (The Asia Foundation, 2010). Concerning the risks of negotiations between the parties, actors require reaching in feasible arrangements. The risks which associate with PPPs require appropriate allocation and management (Zhang, 2005). The core question is that how best to allocate risks and how best to negotiate in order to make successful arrangements of partnership between the public and private sectors for delivering public service.

PPPs continue to seize the attention of policymakers, public administrators, and academic researchers in search of organizational concepts and mechanisms that hold promise for: (a) mobilizing resources beyond those available to public sector entities alone, and (b) offering solutions to complex problems (Brinkerhoff and Brinkerhoff, 2011). The success of PPPs in delivery of information service depends on addressing a number of Critical Success Factors that need to be considered from the first stage of initiating, forming, implementing, monitoring and evaluating the envisioned ISP under a viable PPP model to the last stage of

development and roll-out. Among many, the basic three steps toward a successful PPP are: (a) assess national readiness for PPPs, (b) analyze and address the motivations and risks of the core partners, and (c) develop strategic electronic-government *beacon* scenarios (Bennett and Howard, 2008). On the other hand, although a strong alliance of ISP under a feasible PPP model allocates the tasks, obligations, and risks among the public (principal) and private (agent) sector partners in more efficient way, ongoing questions remain about how to assess, design, and manage IS PPPs which focuses on empowering the channels of governmental civil service delivery in the developing economies context such as Ethiopia.

Regarding the ways of delivery, the channels of service delivery are the ways of communication through which a service is delivered to the citizen (Sousa and Voss, 2006). It is the means by which a citizen requests a public service and receives the resultant output from a service (Harfouche and Kalika, 2009). Services are series of interactions between the service provider and clients that result in an observable output (Janssen et al., 2009). As such, ICT is viewed as a key tool to bring about a change in service delivery approaches (UNDESA, 2008). Among the potential values and efficient uses of ICT is to deliver improved services to citizens (Coleman, 2006). In this regard, the use of ICT is to promote more efficient and effective government, facilitate the accessibility of government services, allow greater public access to information, and make governments more accountable to citizens (Kitaw, 2006).

Optionally, PIS channels, such as Governmental Apps, Web-services, Voice-enabled telecom services, Text-based mobile messages, as potential ICT tools for citizen-based service delivery, are among the important networks to timely deliver basic electronic public service to citizens. Governments propose two types of public service deliveries: (a) traditional service delivered by the traditional physical channels of service delivery, and (b) electronic service (e-Service) created through virtual channels of service delivery (UNDESA, 2008). In a nutshell, electronic participation (e-Participation) encompasses citizen input on decision making and policy development, direct access to government officials, electronic voting, citizen and social networking, and other tools of citizen empowerment (Curtin, 2007).

Identifying list of critical factors that promote or hinder the continuity of ISP under a viable PPP model might be complex. For instance, as identifying potential ICT partners that could efficiently work hand-in-hand with the government require to address different types of risk sharing and incentives among partners, it could be complex to initiate effective partnership pact without ISP or PPP legal regulation. Any complex problem associated with PPP approaches may vary contextually as their specific solutions may not work in other contexts, especially in the cases of poorest countries with lack of guiding PPP framework such as Ethiopia. In particular, ignoring partnership success factors and disregarding partnership critical factors are some of the partnership aspects which require special attention by partnering parties. Therefore, effective collaboration among public and private sector players thus depends on building strategic alignments to revolutionize the envisioned public service delivery solutions. This is often challenging, but when done properly, the benefits of the PPP should be widely recognized as win-wins (Bennett and Howard, 2008). Steered by the statement of the problem stated in the preceding paragraphs of this section, hereafter the researcher argues that it is timely to investigate the case in-depth.

Therefore, this timely research investigates the PPP factors which account for IS partnership success in a developing economy context.

1.4 Research Question

The 2015 Addis Ababa Action Agenda (AAAA) recognizes that both public and private investment have key roles to play in infrastructure financing through PPPs as the need to build capacity require to enter into PPPs, including planning, contract negotiation, management, accounting and budgeting for contingent liabilities (Jomo et al., 2016). This study which is focusing on the exemplar Ethiopian IS PPP, Lehulu, investigates the PPP factors which account for the IS partnership success. Therefore, being aware of the problem statement raised and described in the preceding discussions, the motivation of this research is to produce a theoretical model for surfacing an IS *Partnership Success*. Thus, the research question can be summarized as:

How do PPP factors account for IS partnership success in developing economies?

In order to address the main research question, the researcher has consulted the literature regarding this critical issue especially in the context of low income economies, however little is also known about whether ISP initiatives under a PPP model may contribute for national PIS improvement, ICT infrastructure development, and information systems utilization. Moreover, the long-term impact of ISP and PPP for the delivery of electronic PIS to citizens of the poorest countries received minimal attention.

Undeniably, nowadays the private sector's role could cover wide areas of cooperation and arrangement between regional governments, public sectors, local communities, and other stakeholders on matters such as addressing quality public information demands of citizens and facilitating better service deliveries to citizens. In this regard, the involvement of the private sector in public services delivery also supports the business process to be transparent and competitive. However, due to lack of considerations of how to work with private partners and fill the gaps of basic information services using viable PPPs, progressively the overall development of PIS gradually get less attention. As a result, the basic public systems depend on conventional manual based public service delivery systems for years. This is, especially, true in poor countries with no PPP regulations where hypothetically the public agencies face resource constraints in improving their operations to properly deliver basic public service to their needy or disadvantaged class citizens. Unfortunately, the technology is often the *scapegoat* within an unsuccessful partnership (NASCIO, 2006).

Although, ISPs in poor countries with no PPP regulations might tend to ended-up unsuccessful due to unknown critical factors, on the contrary, the private sector is increasingly being seen as a remedy to several national PIS related challenging problems that are associated with the overall poor public service projects including technical and non-technical supports. For instance, in order to ensure the service satisfaction of citizens, the major benefits of the private sector for the public in general and the government in particular are: (i) the delivery of instant, efficient and effective ICT tools, and (ii) the delivery of

reliable and quality citizen-based service associated from simple governmental-based business practices to a full-fledged public service.

In same vein, as to the knowledge of the researcher, there is dearth of systematically and rigorously undertaken research that focuses on identifying critical factors that contribute for successful IS partnership endeavors mainly under the model of PPPs in the efforts to deliver better public service and electronic PIS in the third-world countries' context. Therefore, the researcher argues that if potential critical success factors of a PPP are properly identified, the private sector can contribute its flexible resources including communications technologies and ICT knowledge to transform the underperforming government agencies' electronic information systems and poor ICT infrastructure specially when a window of opportunity is given to the private firms to invest in low-income countries with no PPP laws such as Ethiopia. In a broader perspective, an effective marriage of partnership between the public and private sectors may contribute for positive transformation of vital public information service changes in countries such as Ethiopia.

Therefore, this timely research investigates the PPP factors which account for IS partnership success in a developing economy context.

1.5 Objective of the Research

With the objective of developing a conceptual framework to construct a comprehensive understanding of a partnership success model in the information systems discipline, this research is designed after a thorough review of existing gaps on diverse research conducted at international and local levels.

Particularly, the role and impact of fruitful ISPs and PPPs for transforming ICT infrastructure and delivering effective electronic PIS is unquestionable. However, research that focuses on the overall contribution of PPPs in the efforts to deliver better electronic public service seems neglected. Accordingly, with the view to understand and explain critical factors that inhibit or enable IS partnership success among governmental agencies and private firms, this study attempts to develop a theoretical model after studying the

Ethiopians' ongoing exemplar ISP project under the Lehulu PPP initiative. Hence, the main objective of this research can be summarized as to surface *the theory of IS partnership success* model.

In the effort to fill the research gap stated in the preceding sections and to address the research's main objective, this research aims to contribute to the information systems discipline in general and the ICT field in particular. Hence, the following five major accomplishments are performed in the course of this study.

- Clarify the misconceptions on the impact of PPPs for ISP and highlight research gaps;
- Discuss and develop testable propositions for further studies;
- Propose a theory of IS partnership success; and
- Offer both theoretical and practical contributions to the field.

1.6 Scope of the Research

The scope of the study is delimited to the Ethiopian ISP context, specifically commenced for empowering the delivery of national vital public service and for transforming the country's poor PIS into the newly initiated electronic PIS project called Lehulu PPP. Data collection for this study covers the stakeholders such as the beneficiary citizens (end-users), governmental institutions, and a private company found in Ethiopia. Most particularly the study focuses on exploring critical success factors of a PPP and examining the un/favorable factors which may impact the delivery of PIS in a low-income country with no PPP regulatory framework establishment. The study involves professionals and experienced personalities who have exposure under the ongoing Lehulu PPP initiative in view of acquiring information about the existence of such exemplar PPP in Ethiopia. Moreover, the study incorporated the Ethiopian government ICT policy documents and selected potential stakeholders.

Regarding the literature reviews of the study, the researcher has consulted both local and international vital publications and unpublished reports to support his argument and forward vital justifications about the context of the study. In conclusion, though the general study context has three vital eras (pre-Lehulu, the Lehulu, and post-Lehulu), studying in detail the

post-Lehulu era is beyond the scope of the study due to the recent decision made by the partners to extend the time span of the Lehulu PPP's contractual agreement for the next two years while this research was conducted. As a result of the project's extension, this exemplar Ethiopian PPP is still actively running. Furthermore, testing the propositions of the proposed theory of partnership success is also beyond the scope of the study due to the unavailability of other national ISP projects under a PPP model inside the country.

1.7 Operational Definitions

Information System is a system in which human participants perform business processes using information, hardware, and software to capture, transit, store, retrieve, manipulate, and/or display information for internal or external customers (Alter, 2000).

Information System (IS) is a set of entities and shared patterns that enable goal attainment through the processing of information (Watson, 2014). Particularly, Information System is a formal, socio-technical, organizational systems designed to process, store, and distribute information (Piccoli, 2012).

Information Technology (IT) / Information and Communication Technologies (ICTs) covers any computer-based technologies used for digital information manipulation and communication although, technically, this also includes telephone and similar technologies; and sometimes "IT" is used to refer to the computer-related technologies (Van Belle, 2009).

Technology Partnership refers to partnerships between a government department and a company in which new systems to develop (Grimshaw et al., 2002).

Information Systems Partnership (ISP) refers to a contractual agreement between a potential technology Company and a government department or other private company in which new IS or related systems to develop. Thus, in this study, ISP is defined by the researcher as partnerships between a potential private sector and a government department or other private Company in which new IS or related systems to develop.

Privatization refers to the denationalization of an industry, transferring it from public to private ownership where the extent of state ownership depends on the political ideology (Ngowi, 2008).

Public Information Services (PIS), as one of the vital public services, literally refers to the use of technology to enhance access to and efficiently deliver government information and services (Brown and Brudney, 2001). PIS is a use of Information Communication Technology (ICT) as a tool to achieve better government (Davies, 2015; Bhatnagar, 2014; Alshehri and Drew, 2010; Ogbomo and Ogbomo, 2008).

Public-Private Partnership refers to a long-term contract between a private party and a government agency, for providing a public asset or service, in which the private party bears significant risk and management responsibility (World Bank, 2012). PPPs are described as sustainable cooperation between public and private actors in which joints and/or services are developed and in which risks, costs and profits are shared (Klijn and Teisman 2000). Besides, **"PPP" (**or **"3Ps")** shall mean a single, long-term, performance-based agreement between a responsible Public Entity and a Private Developing Entity for the development of a Qualifying Project, in which appropriate risks and benefits can be allocated in a cost-effective manner between the contractual partners and where ownership of the Qualifying Project remains with responsible Public Entity, and the operation, if any, and maintenance of the Qualifying Project may revert to the responsible Public Entity at the end of the contract term (AIA, 2014).

PPP contract means a contractual document that govern the relationship between the public and private parties to a PPP which in practice it may comprise more than one document, for example, a PPP to design, build, finance, operate, and maintain (World Bank, 2012).

PPP Legal and Regulatory Framework refers to all the laws/regulations including PPP-specific legislation, public financial management and sector-specific laws/regulations that control whether, or how, PPPs can be implemented (World Bank, 2012).

Re-negotiation refers to changes in the contractual provisions, otherwise than through an adjustment mechanism provided for in the contract (Guasch, 2004). Re-negotiation is

something to avoid where possible, as good use of adjustment provisions can obviate the need for re-negotiation (Guasch, 2004).

Systems Thinking refers to a set of synergistic analytic skills used to improve the capability of identifying and understanding systems, predicting their behaviors, and devising modifications to them in order to produce desired effects where these skills work together as a system (Arnold and Wade, 2015).

1.8 Summary

This chapter described in detail the gap in the current research and highlights the need for an extensive study. Recommendations from various literatures on information systems research continue focusing and studying on beyond systems designing and systems building in general. Although a number of information systems research continue making every effort to put forward the better way to deliver electronic PIS, such efforts have been ignoring the role of PPPs in both the IS and ISP fields. As a result, this study initiated to examine such gaps. Accordingly, this chapter addressed the importance of the research topic and put arguments that support the basic research question of the study. *In general, the statement of the problem of this research mainly focuses on investigating the PPP factors which account for IS partnership success in the context of the developing economies. Therefore, the research question of the study is 'How do PPP factors account for IS partnership success in developing economies?'*

This chapter also outlined a justification for alliance between both the public sector and private sectors depending on their institutional mindset, cultural, social, economic, technical, and political context. All in all, the study has highlighted the necessity of ISPs and PPPs for national PIS infrastructure development.

1.9 Organization of the Dissertation

This dissertation is organized into six chapters. In this introductory chapter of the dissertation, the background of the study, statement of the problem, the research question, and the research context, objective of the research, scope of the research, and operational

definitions are discussed. Issues related to the theoretical foundation and contributions of this research are also highlighted. The remainder of the thesis is organized as follows.

The next chapter, Chapter Two, reviews related literature on ISP, PPP, PIS, information asymmetry, and opportunism. Further details of PPP research provided followed by the presentation of the study's theoretical lens (Agency Theory). Chapter Three describes the research approach considered for this study highlighting the qualitative methodological principles under the positivist qualitative paradigm. It further describes the site and case selection including the data collection, analysis, and validation. It also presents the research layout that shows the research process. Chapter Four presents the case description and case analysis. In Chapter Five, the implications of the findings are summarized and the research propositions are presented. The final chapter, Chapter Six presents the conclusion and implications of the research.

CHAPTER TWO

LITERATURE REVIEW

This chapter begins with an examination of the literature underlying the alternative conceptualization of ISP projects under a PPP model and then proceeds to a thorough examination of the theoretical approach of the study (i.e., Agency Theory) and its analytical approach of the study (i.e., Soft Systems Methodology). The misconceptions, critiques, and applications of PPPs on existing research are also examined. Views and theories which also guiding the direction of the research are presented. Critical Success Factors of PPPs, risk management of PPPs, and financial management of PPPs are also reviewed. A section has also allocated with a review of Soft Systems Methodology to gain better understanding of the conceptual and real world aspects of PPPs. Finally, the chapter ends with discussing why PPP matters for Ethiopia. The chapter, therefore, organizes all relevant literature in a way to addressing the research question. The next section of the chapter begins with the presentation of foundational concepts of PPP.

2.1 Conceptualizing PPP

The term PPP has become a *buzzword* and remains elusive for many as it is mostly used as a synonym for all-purpose public sector modernization. Partnership refers to a relationship involving the sharing of power, work, support, sharing information with others and emphasizes joint goals and/or mutual benefits (Kernaghan, 1993). Partnerships could therefore be considered as a strategic alliance formed among the public and the private sector to, for example, empower PIS of a country, as a result of such alliance, a two-way flow of knowledge sharing can be emphasized (Das et al., 2003).

PPP refers to any form of agreement (including ISP pact) or partnership between public and private parties (OECD, 2010). PPP also refers innovative methods used by the public sector to contract with the private sector, who bring their capital and their ability to deliver projects on time and to budget, while the public sector retains the responsibility to provide these services to the public in a way that benefits the public and delivers economic development and an improvement in the quality of life (UNECE, 2008). Nowadays, PPP is seen as the

panacea to governments not being able to finance the construction of major infrastructure (ModuKumshe, 2015). In particular, the term PPP encompasses a variety of different types ranging from informal co-operations to contract-based collaboration or even joint organizational arrangements (McQuaid, 2000). PPP can also be seen as a network because it includes actors from different organizational domains who are dependent on each other and therefore engage in joint decision-making (Klijn and Teisman, 2003). Progressively, PPP agreements were launched as a means of overcoming the adversarial relationships, especially in the construction industry (Cheung, 2009). In short, PPPs have different levels of organizational models and models which involve both the public actors and private sector firms. For instance, the American Institute of Architects defines PPP as:

> *"PPP" (or "3Ps") shall mean a single, long-term, performance-based agreement between a Responsible Public Entity and a Private Developing Entity for the Development of a Qualifying Project, in which appropriate Risks and benefits can be allocated in a cost-effective manner between the contractual partners and where ownership of the Qualifying Project remains with the Responsible Public Entity, and the operation, if any, and maintenance of the Qualifying Project may revert to the Responsible Public Entity at the end of the contract term" (AIA, 2014).*

PPPs can maximize benefits for development through collaboration to enhance efficiency Brinkerhoff (2011). PPPs can improve service standards, transfer risk from the public to the private sector and import expertise and professional management skills from the private sector (Flinders, 2005; James et al., 2005). The definition of Brinkerhoff and Brinkerhoff (2011) recognize a cross-sectoral collaboration with the following features as representing the fullest expression of the partnership's features:

- Jointly determined goals;
- Collaborative and consensus-based decision making;
- Non-hierarchical and horizontal structures and processes;
- Trust-based and informal as well as formalized relationships;
- Synergistic interactions among partners; and
- Shared accountability for outcomes and results.

In general, PPP refers to a form of co-operation between public authorities and the private sector to finance, construct, renovate, manage, operate or maintain an infrastructure or service (Egbewole, 2011). For instance, the analysis of Iossay and Martimort (2011) pointed out that the efficiency gains that bundling planning and implementation, under PPPs, can bring in terms of better project design and lower operational costs. Concerning the potential purposes of PPPs, Bovaird (2004) listed a number of different purposes they might fulfill:

- Policy design and planning (e.g., where the consultants become a central part of the planning function over a long period);
- Policy coordination (e.g., allocation of responsibility for particular policies to specific agencies perhaps through a policy steering group, although typically the final decision will rest in the public sector) or setting priorities;
- Policy monitoring (e.g., policy steering group with partners from public, voluntary and private sectors);
- Policy evaluation and review (e.g., policy steering group with partners from voluntary and private sectors);
- Policy implementation and service delivery in one of three ways: in-house (with external partners in advisory capacity, e.g., management consultants), coproduction with external partners (e.g., joint venture), or full externalization (e.g., selling of stock to associations);
- Resource mobilization (e.g., sponsorship or fundraising management); and
- Resource management (e.g., ICT or facilities management).

2.2 PPP and its Win-Win Approaches

Historically, it is a recent phenomenon the collaboration between the public and private sectors receiving special attention by various governmental agencies. PPPs rose to prominence in different countries in the early 1980s as governments accumulated large public debts spurred by the recessions of the 1970s and the 1980s (Rashed et al., 2011). The latter half of the 1990s witnessed a burgeoning number of initiatives involving collaboration between the corporate and public sectors with the purpose of overcoming market and public ‘‘failures’’ (Buse and Walt, 2000). Even though some conducive environments and polices

which are suitable for PPP arrangements gradually come to front, the relationship between the private and public sectors continue experiencing various problems to constitute partnerships. The most important PPPs since the 1990s have been in education, health, and transportation (Li et al., 2003), but nowadays it encompass ICT infrastructure and information systems development. Although the phrase PPPs was little used before the 1990s, concession contracts have been used for many centuries (Hall, 2008). For instance, the concession principle simply dictates that a private company agrees to invest its money for supplying services and expects to get a return by charging end-users in short term or long term modality.

There is general agreement in the literature that the PPP has its roots in the privatization movement of the 1970s and 1980s (Savas, 2000, Hodge and Greve, 2005). Gradually, practitioners and stakeholders realized that a PPP does not only signify reliance upon resources from the government, but also incorporates private actors' skills and managerial expertise in building, operating and maintaining public service projects (Petersen, 2011). In a nutshell, PPPs have been viewed as a retreat from the hard-liners' advocacy of privatization (Skelcher, 2005).

Beyond the reasons stated previously, either directly in PPP or indirect forms of alliance, the private sector is increasingly getting more involved in the provision of public infrastructure and services across a wide range of industries and sectors, including power, telecom, schools, hospitals in order to alleviate the spending on governments' budgets (Algarni et al., 2007; Zhang, 2005). As presented in Table 2-1, different authorities (Deloitte, 2006; UNECE, 2008; Gallegos, 2012) have identified various options of PPP models that allocate responsibilities and risk of operation between public and private sectors and other concerned stakeholders to deliver the intended ICT service for the general public. Consequently, based on such models, over the past three decades governments in both developed and developing economies have embraced PPPs as an alternative to the standard models of public procurement strategy to deliver public services, and this is especially true for governments lacking public sector resources to deliver important public services (Rashed et. al., 2011).

Table 2-1: Options of PPP models (Sources: Deloitte, 2006; UNECE, 2008; Gallegos, 2012)

Approached and Models of PPP	Abbreviated as
Build-Transfer	BT
Buy-Build-Operate	BBO
Build-Operate-Own	BOO
Build-Operate-Transfer	BOT
Build-Transfer-Operate	BTO
Build-Lease-Transfer	BLT
Build-Lease-Operate-Transfer	BLOT
Build-Operate-Own-Transfer	BOOT
Design-Build-Finance-Operate-Transfer	DBFO
Design-Build-Finance-Maintain	DBFM
Design-Build-Finance-Operate-Transfer	DBFOT
Lease-Develop-Operate	LDO
Rehabilitate-Operate-Transfer	ROT
Initial-Public-Offering	IPO

Inadequate infrastructure is a constraint on growth worldwide, and particularly in developing countries where infrastructure services are often inadequate to meet demand, resulting in congestion or service rationing as infrastructure services are also often of low quality or reliability, while many areas are simply un-served (World Bank, 2012). An effective PPP recognizes that the public and private sectors have certain advantages in performing specific tasks (Yescombe, 2007). For instance, PPP procurement provides the public sector with a wide variety of advantages, including that services delivered to customers will be of better quality and lower cost (Sadka, 2007). All in all, Public–Private models (as presented in Figure 2-1), in their essence, have long been advocated and analyzed as organizational solutions to pressing societal problems that call for the comparative advantages of government, business, and civil society, however, ongoing questions remain about how to design, manage, and assess PPPs (Derick and Jennifer, 2011). Comprehensive pictorial diagrams of the various options of PPP models are presented in Figure 2-1.

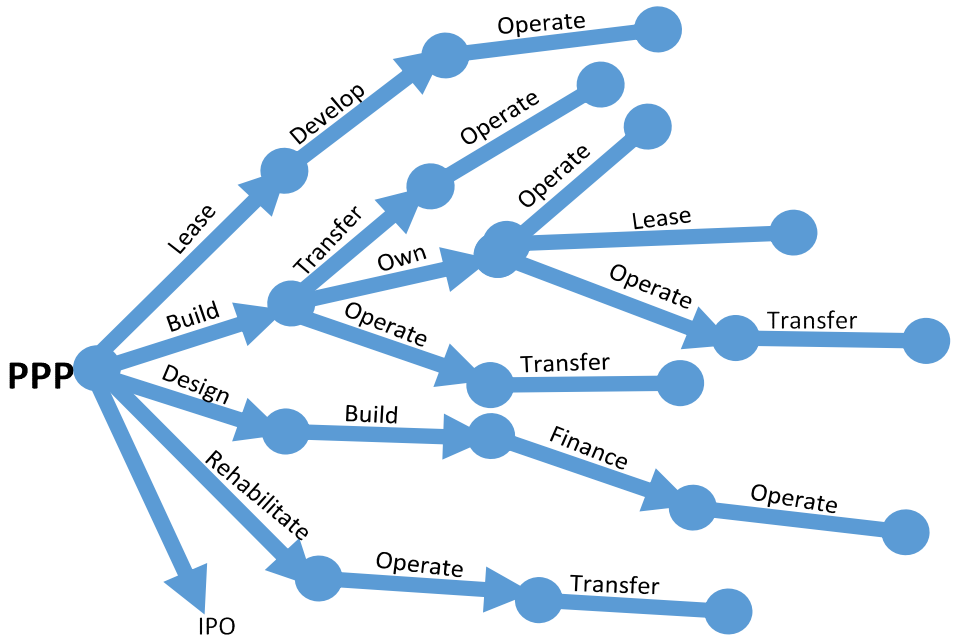

Figure 2-1: Options of PPP models

Economically, PPPs can also provide public services more efficiently by reducing costs and delivering higher quality for the same cost (Calabres, 2008). The major benefit of a PPP for the beneficiary citizens in general and the government itself are that the delivery of instant, efficient, and effective electronic information systems services. Such electronic PIS can be designed, developed, and operated by potential private sector expertise under a PPP contract to empower diverse public ICT service thereby ensuring the satisfaction of citizens of the third-world countries including Ethiopia. In this regard, the involvement of the private sector in public service delivery also supports the governmental business process to be transparent and competitive; as a result, the long-term costs of the service delivery can be assessed more realistically under a PPP framework, which in turn promotes efficient use of resources (Hussen, 2013). Due to these factors, a PPP is increasingly being seen as panacea to several economic and financial challenging problems that governments or public agencies in general face in serving their population effectively in the third-world countries. This is especially true in Ethiopia, where generally the public agencies face ICT resource constraints in improving their communication operations and delivering information services to their needy citizens.

Poor infrastructure performance reflects pervasive challenges facing governments due to: first, most countries simply are not spending enough to provide the infrastructure needed; secondly, poor planning and coordination, weak analysis underpinning project selection, and pursuit of political gain, mean that the limited resources are often spent on the wrong projects; third, the delivery of infrastructure assets and services often disappoints construction of new assets costs more and takes longer than expected, and service delivery is weak; finally, infrastructure assets are often poorly maintained, increasing costs and reducing benefits (World Bank, 2012). Therefore, PPP as a mechanism can help improve service infrastructure delivery, as described in Figure 2-2, if integrated into vital policies.

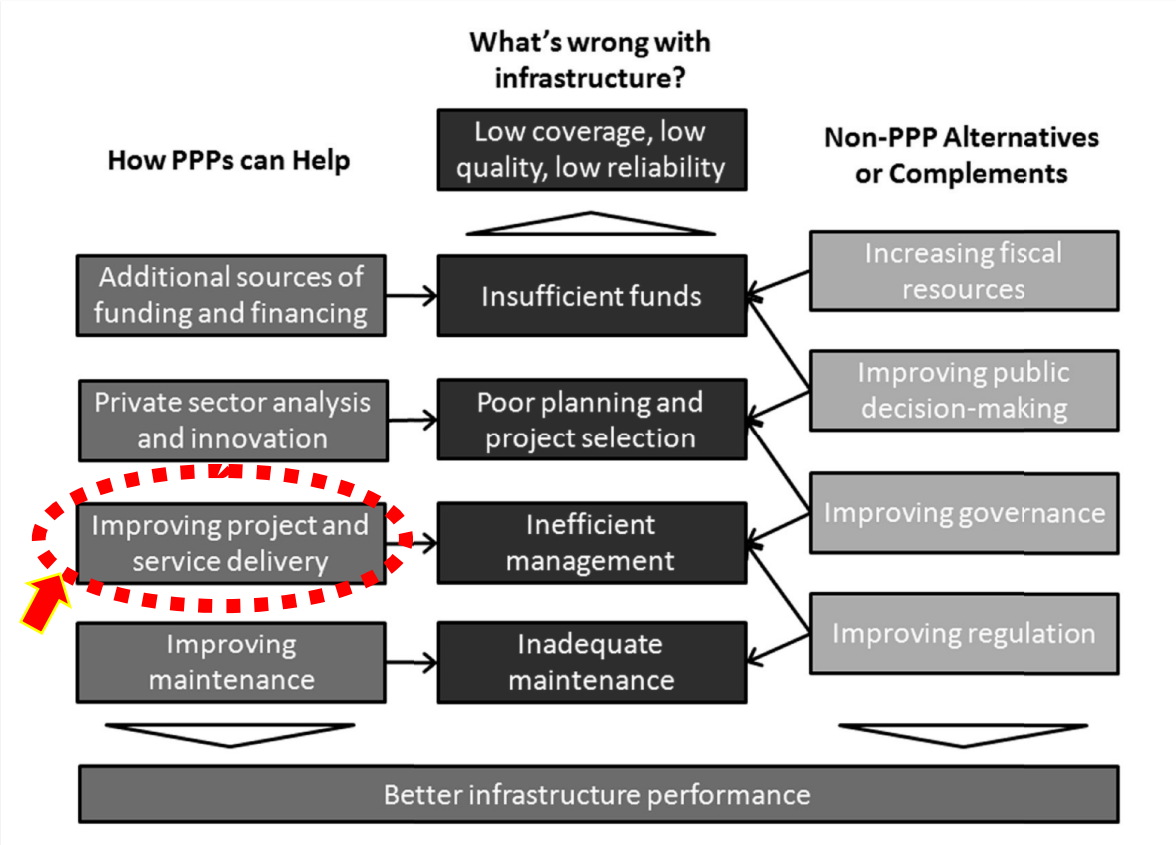

Figure 2-2: Infrastructure development by PPP models (Source: World Bank, 2012)

Progressively, nowadays PPPs cover wide areas of IS cooperation and arrangement between governments and private sectors, local communities, and others stakeholders to deliver electronic public service and other vital public ICT infrastructural developments (see Figure 2-3). The benefits of PPP for the private sector mainly concentrate on two aspects: enlarging the business market and facilitating innovation (Akintoye et al., 2009). The private sector's role in the partnership is to make use of its expertise in commerce, management, operations, and innovation to run the service efficiently and it may also contribute investment capital depending on the type of contract (Yescombe, 2007). On the other hand, the study conducted by ESCAP (2011) lists the conventional criteria of classifying the approaches to PPP as: (i) ownership of capital assets; (ii) responsibility for investment; (iii) assumption of risks; (iv) duration of contract, etc. Taking these standards into account, PPP models classified into five broad categories: (i) Supply and management contracts, (ii) Turnkey contracts, (iii) Lease, (iv) Concessions, (v) Private finance initiative and private ownership.

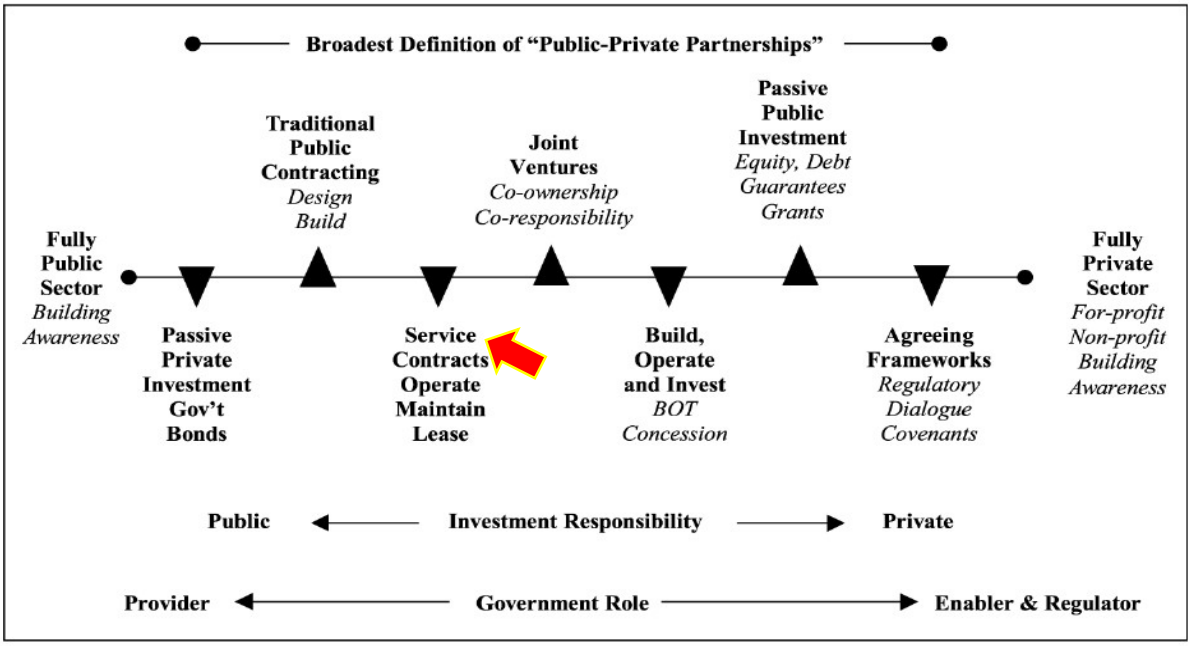

Figure 2-3: The Broadest Definition of PPP (Source: Gidman et al., 1995)

2.3 Misconceptions and Critiques of PPP

PPP has both supporters and antagonists. Most of the common misunderstandings resulting from variations in knowledge levels among stakeholders on value-based disagreements (Wiig, 2002). Even beneficiaries sometimes perceive that due to PPPs, they become objects of a profit-making calculus rather than a public service (Rosenau, 2000). Potential partners in their part also perceive and often suggest that the funding available for working as an agent with a governmental agency is often lower than what the public agency spent when it carried out the function *in-house* (Smith and Lipsky, 1993).

As there are strong proponents of PPPs, there are also some practitioners and scholars who strongly criticize the concept and role of PPPs. For instance, most proponents of PPPs assert that it curbs significantly potential public service challenges faced by ill-equipped governmental agencies in their effort to meet the ever-increasing citizens' demands. The issues of accountability and governance are all the more acute when the partnership is reluctant to divulge information to outsiders on the grounds of *commercial confidentiality* (particularly in the case of partnerships which involve private firms) or on grounds of *data protection* (which can be used as a ground for secretiveness in virtually all partnerships) (Roberts, 2002). Thus, governmental agencies need to be committed to accountability mechanisms that encourage ethical practices and ensure the implementation of proper processes, including detailed documentation and openness to scrutiny, not abusing privileges (e.g., not leaking confidential information to the media to strengthen a particular political view), and not manipulating the public service to shape its advice for political gain (Bridgman and Davis, 2004).

In contrast, others believe that the private sector projects tend to have a profit-oriented motive and they argue that their roles lack sustainability. The scholars attempt to explain the disadvantages of PPPs. For instance, in Australia there was blurring of the sectors, giving rise to governance problems, and the rise of partnerships has partly been a consequence and yet many of such partnerships have, in turn, given rise to similar problems (Wettenhall, 2001). Similarly, a study conducted in the UK under PPP pact for defense contracts

concluded that PPPs do not necessarily lead to efficiency gains as they have significant costs and disadvantages (Van Herpen, 2002).

Under any PPP agreements, uncertainty is important not just because the agent maybe risk averse but also because it affects the degree of contract incompleteness (Iossay and Martimort, 2011) which at the end might create information asymmetry and opportunism. Stressing such effects, some authors (e.g., Wettenhall, 2001; Dawson et al, 2011) have also gone further, suggesting that a major problem of a partnership approach to public issues is that it brings fragmentation of structures and processes, which in turn leads to blurring of responsibilities and accountability, as each agency has sacrificed some of its sovereignty in joining the partnership. It can also claim that the partnership, rather than itself, is the accountable body. As a result, voluntary partners are reluctant to become principal service providers in partnerships with public sector organizations (Osborne, 2000).

Partnerships frameworks for PPP pacts are also known to differ due to their context dependent characteristics. First, the private sector is usually highly influenced by its competitive environment, whereas the public sector concentrates on information provision and service delivery. Second, whereas the private sector is often shareholder-dependent, the public sector concentrates on stakeholder interests and tends to involve multiple parties in the process, thus being more complicated to deal with (Cong and Pandya, 2003). Concerning the potential sources of misconceptions and resistances for adopting PPPs, Bovaird (2004) identifies a number of other positions from which partnerships can be seen as insidious and undesirable by actors:

- **Staff fear:** Losing jobs or experiencing worse conditions of service when a partnership takes over responsibility for the area of workers. This has indeed been the experience of many public service employees, but there is the contrasting experience of the many employees who have successfully made the transfer and found the new working environment congenial and more rewarding. There is little research into the balance of these tendencies.

- **Politicians fear:** Losing control over policy-making and service management is the concern of politicians. This is perhaps an example of the perennial reluctance of politicians to share power, e.g., with other partners, even though doing so would widen the realm over which power is exercised, e.g., *by growing the business* to serve other areas. There are now examples of PPPs where the opportunities for wider working have been grasped and, as a result, politicians have been able to further their own vision of how public services should be delivered.

- **Service-users and citizens fear:** This fear is real and surfaces in many public consultation exercises around the move to *a mixed economy of provision* involving PPPs. However, it is also clear that many service-users are unaware of (and uninterested in) the precise legal standing of the organization which provides their service and quite content with whatever configuration is used to provide service, as long as the service quality is satisfactory.

- **Voluntary organizations and NGOs fear:** The fear that as *agents* they would lose their independence and, therefore, their ability to be critical of the policies and practices of their *principals*.

Regarding the impact of *technology fear* (i.e., usage, failure, and interruption) on potential ISPs and information systems development, mostly information systems initiatives tend to failures because they have many facets such as undelivered functionality, schedule overturns, resistance, and costs (Sauer, 1999). In a nutshell, one may conclude from the above studies, the private sector involvement in the provision of public service may reduce the likelihood of an equitable provision of service (Hall, 2008; Cheung, 2010). However, the researcher strongly argues that as the overall aim of PPP is working jointly with the public sector to meet the public needs, thus, the role of the private sector is unquestionable. Hence, this study focuses specifically on one ISP project which initiated under a PPP model among the Ethiopian government and a private company to transform national PIS in the country.

2.4 PPP Vs. Outsourcing

Technology Partnership refers to a partnership between a government department and a company in which new systems intend to develop (Grimshaw et al., 2002). It can be initiated amongst governmental and non-governmental organizations using different models in terms of PPPs or Outsourcing. PPP has been defined as a contractual arrangement which is formed between public and private sector partners that involves the private sector in the development, financing, ownership and or operation of a public facility or service (Egbewole, 2011; Gallegos, 2012).

Outsourcing is directed at efficiency gains whereas partnership arrangements especially concern increasing effectiveness (Klijn and Teisman, 2000). On the other hand, privatization, also called concession, in simple practical terms means that when a government sale or lease or other disposition of public or state owned assets including land to the private sector (Nathan, 2002). Hence, ownership and management of the ICT projects may shift from the public to the private sector. However, as observed in the third-world countries, concessions were unable to deliver the required scale of investment for public services at affordable rates, and so were generally replaced by public ownership ultimately (Hall, 2008).

Technically, scholars have attempted to distinguish between PPPs and Outsourcing using practical and theoretical terms. For instance, Klijn and Teisman (2000), who distinguish between outsourcing and contracting out by focusing on the consumer of the service, state that if the public agency procures ICT service from a private company for internal means (self-consumption) it is called '*Outsourcing*' whereas if a service is directly delivered to customers of the public authority without further processing the authors refer to it as '*contracting out'*. Since partnerships often considered as a mixture of various modalities, the elusive nature of the term partnership creates space for negotiating the norms and practices of partnership (Tomlinson, 2005).

The literature on PPPs suffers from conceptual imprecision, and is weakly integrated with practice (Derick and Jennifer, 2011). There are divisions among practitioners and scholars about the proper uses and types of PPPs in practice. For example, some may focus on using PPP as an inter-organizational arrangement between different institutions. Others may use PPP as governance or management tool. Still, others may concentrate on using PPP as a development strategy.

Generally, technology partnership has many advantages. For instance, PPP procurement practices can potentially provide a wide variety of technological and financial advantages, including the following seven benefits, specifically for the public sector (Akintoye et al., 2009).

- Enhance government's capacity to develop integrated solutions (e.g., software);
- Facilitates creative and innovative approaches (e.g., knowledge sharing);
- Reduce the cost to implement a project (e.g., crowd sourcing);
- Reduce the time to implement a project (e.g., project management software);
- Transfer certain risks to a private partner (e.g., risk management);
- Attract larger, potentially sophisticated, bidders to a project (e.g., expertise); and
- Access skills, experience and technology (e.g., technology transfer).

In sum, as the term partnership might indeed carry less controversial connotations than 'privatization' and 'contracting out' (Savas, 2000), there are differences between outsourcing and partnership approaches. Outsourcing, for instance, is characterized by a principal-agent relationship, whereas PPP requires a joint decision making and production (Klijn and Teisman, 2000). Table 2-2 shows the difference between outsourcing and PPP.

Table 2-2: Comparing PPP and Outsourcing (Adapted from: Klijn and Teisman, 2000)

PPP	Outsourcing
Government and company (consortium) are involved in **joint** decision making and production	Government and company (or consortium) are involved in principal-agent **contractual** relationship
Both parties are involved in **joint** processes early on to develop joint products that contribute to their interests	Government defines the problem, specifies the solution and selects a private firm that can produce results in a **cost-efficient** way
Increasing **effectiveness** (synergy and enrichment of output)	Benefits concern **efficiency** (quicker and **cheaper**)
Keys to success are an interweaving of goals, establishing rules for interaction, developing rules and concerning **joint effort** and production commitments	Keys to success are unambiguous definitions of goals, projects, rules of tendering, rules of selection and rules of **delivery**
Based on the **principles of process** management because the joint goals, the art of financing, realization and utilization remain subject to **joint** decision making	Based on the **principles of project** management because there is a clear principle, clear goals and well-defined project specifications
Mutual trust is crucial for lasting relationship between partners who maintain their own interests, ways of working, and financing principles	**Contractual** transparency regarding rules of tendering, selection and delivery and rules of inspection are crucial for a good relationship

2.5 Risk Management in PPP

In this context, a *Risk* is unpredictable variation in the project's value—from the point of view of some or all stakeholders—arising from a given underlying *risk factor* (World Bank, 2012). Unarguably, systems development is a risky initiative. A systems development to have failed if development of operation ceases due to leaving supporters dissatisfied with the extent to which the system has served their interests (Sauer, 1993). For instance, between 1991 and 2007 about 10% of PPP projects were terminated and another 10% reverted to the public sector after the contract expired (Marin, 2005). Hence, a mutual consensus among stakeholders is required toward effective partnership risk management.

Above all, how to fairly share the responsibilities of risks and the benefits between public and private sectors, or to achieve optimum risk transfer as against maximum risk transfer when dealing with risk in PPP projects, deserves consideration in PPP research (Grimsey and Lewis, 2002). The need for overlook potential risks while establishing a partnership

agreement with potential ICT partners is to minimize uncertainty by forming a stable relationship with actors.

PPP risks vary depending on the nature of the project and the assets and services involved, which are often grouped into risk categories such as the risks associated with a particular function (such as construction, operations, or financing), or with a particular project phase (such as termination or transfer) (World Bank, 2012). In this regard, proper risk management systems may support all partnering parties in decision making processes while dealing with PPP initiatives. Appropriate risk analysis processes may also help all partnering parties to result in proper identification of risky partnership factors thereby allocating the risks accordingly. Although the contribution of PPPs for successful delivery of PIS and public infrastructure development has started to draw the attention of information systems researchers, but the literature lacks well formulated comprehensive models that could help to assess potential partnership risks.

In general, risk identification is finding out which potential risks are likely to affect a project and documenting. Since risk is a function of the likelihood of a given threat-source's exercising a particular potential vulnerability, and the resulting impact of that adverse event on the organization (Stoneburner et al., 2002), the characteristics of those risks require to be analyze in advance in order to identify the opportunities with full positive outcomes as well as threats with unintended negative outcomes. The development of a risk checklist is one of the methods of risk identification (Li et al., 2005). Risk identification techniques may include questionnaire survey, workshops, and feedback from similar projects that aid reviewing documents, discussions and brainstorming sessions with specialists, experienced advisers, project managers, government representatives, stakeholders and users (Fischer and Alfen, 2009). In this context, for example, the use of private finance can help to re-establish the benefit of bundling only if lenders have sufficient expertise to help to assess project risks (Iossay and Martimort, 2011). To investigate possible risks of partnerships in delivering vital public information service in low-income countries specifically in a context similar to that of Ethiopia, the researcher has explored different research (e.g., Li et al., 2005; Fischer

and Alfen, 2009; Roumboutsos, 2010). Table 2-3 shows a comparative analysis of risks and rewards of partnerships as identified by Corrigan et al. (2005).

Table 2-3: Comparing the Risks and Rewards of Partnerships (Source: Corrigan et al., 2005)

<table>
<tr><th colspan="2">Risks</th><th colspan="2">Rewards</th></tr>
<tr><th>Public</th><th>Private</th><th>Public</th><th>Private</th></tr>
<tr><td>Conflicts of interest, perceived or real</td><td>Excessive costs of development, unprofitable</td><td>Greater community wealth, tax base, public infrastructure</td><td>Resources to sustain organization</td></tr>
<tr><td>Use/misuse of public funds and resources</td><td>Time-consuming process required; time is money</td><td>Increased taxes, other revenue</td><td>Profitability</td></tr>
<tr><td rowspan="5">Controversial impacts on those directly affected:

• Conflicts with adjacent
• Property owners
• Dislocation by condemnation
• Relocation costs and procedures
• Disagreements on fair market value</td><td>Failure to create long-term value</td><td>Promote, advance city image</td><td>Value, wealth creation</td></tr>
<tr><td>Accusation of being unfairly enriched at public expense</td><td>Job creation</td><td>Enhanced reputation, experience to get next project</td></tr>
<tr><td>Change in key public, political, or staff leadership that derails partnership</td><td>Community betterment, enhanced quality of life</td><td>Market niche</td></tr>
<tr><td>Market shortfall, failure</td><td>Reelection (elected officials)</td><td>Enhanced quality of life of community</td></tr>
<tr><td>Loss of invested equity</td><td>Job retention, advancement (staff)</td><td rowspan="2"></td></tr>
<tr><td>Developer fails to perform or goes out of business</td><td>Untimely public airing of critical project details, especially financing</td><td rowspan="2"></td></tr>
<tr><td>Public opposition</td><td>Liability impacts</td></tr>
</table>

Gradually, the identification, allocation and management of risks have grown to become an essential part of PPP processes (Grimsey and Lewis, 2004). For example, in most PPP arrangements, the government's role in the delivery of infrastructural and public services may changes from owners/managers to overseers, where the investors undertake far more responsibilities and assumes more complicated risks than a mere contractor (Reijniers, 1994). Similarly, fluctuating inflation and unpredictable revenue variables are some of the most common concerns among private sectors (Spackman, 2002).

Proper application of risk management techniques can make significant contributions to identifying risks and minimizing their negative impacts, and also in optimizing overall project performance (Loosemore and Zou, 2005). For e.g., Benz et al. (2001) have present a PPP model which mixes elements of private information (whoever builds an asset knows how efficient it can provide the service) and moral hazard (service can be improved by effort). Likewise, to minimize the misconception of risks associated with PPP initiatives, De Palma et al. (2009) identify the typology of risks in partnerships (see Table 2-4).

Table 2-4: Typology of Risks in Partnerships (Source: De Palma et al., 2009)

	Project risk	**Risk bearer**	**Partnership risk**	**Risk bearer**
Private information of the firm (with perception bias by the government)	• Maintenance risk • Construction risks (due to cost overruns, delays, poorly designed asset) • Performance risk (due to poor quality of operations) • Demand risk (due to poor performance of the private operator)	Private	• Ability risk (the private operator may not be able to manage efficiently the project) • Renegotiation risk (expropriation of the government by renegotiation)	Public
Symmetric information (with possible perception bias by all parties)	• Financial risk (inflation, interest rate and exchange rate fluctuations) • Natural disasters (storm, flood, hurricane) • Macroeconomic shocks (recession, crisis) • Demand risk (due to the macroeconomic)	Public and Private	• Residual value risk (uncertainty about the value of the asset at the end of the contract)	Public and Private
Private information of the government (with perception bias by the firm)			• Political risk (expropriation of firms, political violence) • Regulatory risk (government's contractual obligations) • Demand risk (due to government's obligations)	Public and Private

Some of the potential benefits of having proper risk analysis procedures for ISPs could be any partner may collect vital information regarding the impact of the partnership from different angles in order to analyze potential risks regarding the initiative. Furthermore, identification of risk factors may also encompass collection of vital information from all the parties involved in the PPP. In general, some of the common risks associated with PPPs projects may include the following eleven types of risks: legal risks; political risks; financial/market risks: project cost, interest rate, exchange rates, currency inflation, fee level and adjustment; economical risks; social and public acceptance risks; construction and geological risks; technical risks; technology risks; health risks; safety risks; and management risks (Zou et al., 2008).

2.6 Agency Theory as Guiding Theoretical Framework of the Research

Organizations (public or private) are distinctly embedded in their environments because the primary way agency theory distinguishes itself from *traditional* information economics is its belief that multi-person, incentive, asymmetric information, and/or coordination issues are important in understanding how organizations operate (Lambert, 2001). The behavior of an organization is the equilibrium of a complex contractual system made up of maximizing agents with diverse and conflicting objectives (Jensen, 1983). Simon and Lieberman (2010) reinforce this behavior as part of any decision that arises from two sources: the internal and the external environment. However, to examine how PPP stakeholders behave in their environment, such as in poor countries' environment, it requires studying the enablers of contractual links between the public and private organizational structures, contracts, extent of cooperation, and informal arrangements. Thus, there is a need to examine institutional structures, contracts, and informal arrangements that are created to reduce conflict, to govern relations, and to increase the extent of cooperation and the benefits reaped from it (Jensen, 1994).

Agency theory predicts that the more outcome-based (and thus less behavior-based) the contract, the greater the project success (Balkin et al., 2000). In general, information systems development projects may fail, according to the Agency Theory, for the following

four major reasons (Mahaney and Lederer, 2003). First, contracts are not sufficiently outcome-based. Second, monitoring is ineffective. Third, organizations fail to manage goal conflict, shirking, and privately-held information well enough. Fourth, organizations do not effectively employ task programmability techniques. Though, Agency Theory focuses on (see Figure 2-5) creating an optimal contract that balances risk and cost (Eisenhardt, 1989), the role of information asymmetry in selecting constraint mechanisms has not been well examined (Dawson et al., 2011). Hence, to address the emerging organizational IS partnership gaps, this dissertation adopts the concept of Agency Theory to conceptualize and extend propositions toward a theory of IS partnership success.

Table 2-5: Agency Theory Approach (Source: Kathleen, 1988)

Approach	Agency Theory
Key idea	Organizational practices arise from efficient organization of information and risk breaking costs
Basis of organization	Efficiency
View of people	Self-interested rationalists
Role of environment	Organizational practices should fit environment
Role of technology	Organizational practices should fit technology employed
Problem domain	Control problems (vertical integration, compensation, regulation)
Independent variables outcome	Outcome uncertainty, span of control, programmability
Assumptions	People are self-employed People are rational People are risk-averse

(A) Principal-Agent Problem

Agency Theory was first explicitly modelled by Jensen and Meckling (1976) in their study of the structure of the firm. Agency Theory is considered one of the early theories applied to address the behavioral implications of different actors in an organizational setting. The theory specifically focuses on contracts and contracting which is the most distinct feature of the Agency Theory (Waterman and Meier, 1998). Agency Theory can be used to look at both the explicit (legal) and implicit (social) aspects of contractual arrangements between a Principal and an Agent (Eisenhardt, 1989). Agency Theory also allows the explicit

incorporation of conflicts of interest, incentive problems, and mechanisms for controlling incentive problems into business, behavioral and economic models (Lambert, 2001). In essence, the theory provides a structure within which to model and understand a vast array of organizational arrangements (Jensen and Meckling, 1994).

Agency Theory addresses the exchanges involving the cooperative effort and delegation of work as well as decision making by one party (called the principal) to the other (called the agent) (Jensen and Meckling, 1976). Pass et al. (2000) describe an agent as a person or company employed by another person or company (called the principal) for the purpose of arranging contracts between the principal and third parties. Agency Theory also addresses specific assumptions about human nature (self-interest, bounded rationality, risk aversion), information (which is seen as a commodity that can be purchased), and organizations (goal conflict among members) (Eisenhardt, 1989). Agency relationship refers to the many relationships involved in the delegation of decision making from one party (principal) to another party (agent) (Craig, 2010). The principal's roles are to supply capital, to bear risk, and to construct incentives, while the roles of the agent are to make decisions on the principal's behalf and to also bear risk (Lambert, 2001).

Agency Theory describes an agency-relationship as a contract (implicit or explicit) in which one or more principal(s) engage the agent(s) to take actions on behalf of the principal(s) which involves the delegation of some decision-making authority to the agent. However, often the agents to whom the principal delegates authority have an objective function that diverge from his or her own (i.e., because they are self-interested) (Jensen and Meckling, 1992). For example, when the principal has information to verify the agent’s behavior, the agent is more likely to behave in the interest of the principal, similarly, when the contract between the principal and agent is outcome-based, the agent is more likely to behave in the interests of the principal (Eisenhardt, 1989). It has also indicated that more monitoring encourages agents to act in the interests of the principal and that monitoring in the presence of an outcome-based contract is particularly effective (Tosi et al., 1997).

Often, there can be multiple principals and/or multiple agents (Bendor et al., 2001). Some agents can even be both a principal and an agent in some cases (Lambert, 2001) because relationships in different contexts can be considered to be an example of a pure agency relationship when the principal and the agent are (i) bondholders vs. shareholders, (ii) regulator vs. regulatee (iii) citizens vs. government policy makers (iv) two separate firms (e.g., public or private) (Lambert, 2001).

To constrain the conflict of interest between partners and a principal-agent problem, the need for designing different types of contracts has been at the heart of Agency Theory. Typical reasons for conflicts of interest include (i) effort aversion by the agent, (ii) the agent can divert resources for his private consumption or use, (iii) differential time horizons, e.g., the agent is less concerned about the future period effects of its current period actions because it does not expect to be with the firm or the agent is concerned about how its actions will affect others' assessments of its skill, which will affect compensation in the future, or (iv) differential risk aversion on the part of the agent (Lambert, 2001). The conflict here results in what Eisenhardt (1989) terms as the agency problem.

Agency Theory also predicts that a compensation policy will tie the agent's expected utility to the principal's objective (Johnson and Greening, 1999). Principal may be pursuing multiple goals and hence, there will be a need to design contracts that align the agent's goals with the high priority goals of the principal (Waterman and Meier, 1998). As shown in Figure 2-4, for instance, building incentives into contracts is deemed to align the interests of the agent with those of the principal, and is deemed to be an appropriate method to control self-interest (Jensen and Meckling, 1976). Hence, Agency Theory assumes that individuals will only ever act in self-interest, and the key to a well-functioning organization is to put in place mechanisms that ensure the minimization of self-interested behavior (Jensen, 1994).

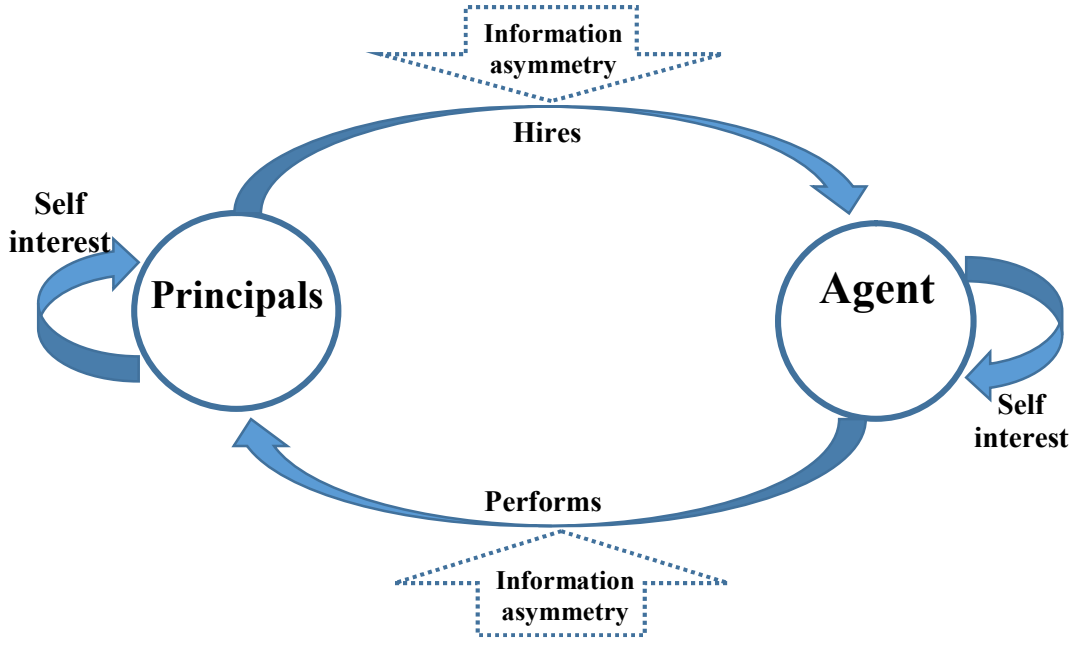

Figure 2-4: Demonstration of the Agency Theory (Inspired by: Eisenhardt, 1989b)

In sum, the conflict between shareholders and managers has resulted in the formulation of contracts to mediate the agency relationship (Jerzemowska, 2006). Usually differences in attitudes toward risk may lead to differences between the principal's and agent's preferences concerning actions to be taken (Waterman and Meier, 1998). It is plausible that an uninformed principal can benefit from the delegation to an informed agent and that it is in fact optimal for an uninformed principal to do so given their lack of skills, information, qualifications, knowledge, and experience (Bendor et al., 2001). These conflicts of interest between shareholders of publicly owned organizations are a classic example of a principal-agent problem. Hence, to address the research question of this study and to better understand the impact of PPP arrangement in the Ethiopian Lehulu partnership, the principal-agent problem is examined.

(B) Information Asymmetry and Opportunism

Information asymmetry can be considered as the existence of unequal information during agreements or settlements when an agent/principal has more information than another

agent/principal. This problem was studied extensively by three Nobel Laureates namely George Akerlof, Michael Spence, and Joseph Stiglitz. The problem of information asymmetry mostly cannot be easily detected or avoided, as it may appear as a pre-contractual problem or post-contractual problem in partnership agreements. For example, moral hazard and information asymmetry arise as a post-contractual problem when the principal cannot be certain about the Agent's behavior and its effects on the outcomes; however, pre-contractual problem arises because the principal may not be certain about the agent's motivation for entering the contract (Waterman and Meier, 1998). Thus, in most cases the principal has to invigilate the agent by setting up monitoring mechanisms (Jensen and Meckling, 1994; Craig, 2010). For instance, the study of Spence (1973) maintains that in any contractual agreement settings when a principal (the potential contractor) who is interested in knowing as much information about an agent (the potential contractee) signals to reveal as much information as possible. Likewise, the potential agent will signal to the potential principal by sending a message that the agent is skillful and fully qualify for the intended job/contract.

The other issue with information asymmetry is that of screening which was studied by Stiglitz (1974) and introduced the concept of screening where the contractor/partner (either the agent or principal) who knows less information induces the other contractor/partner (either the agent or principal) who knows more information to reveal some information during the process of their partnership/contract. Since in many professional exchanges information asymmetry is bilateral, which means that both parties hold information that the other party lacks and, as a result, both parties have the means to be opportunistic (Dawson et al., 2016). Therefore, information asymmetry is a facilitating condition for opportunism (Wathne and Heide, 2000).

The symptoms of opportunism in partnership agreements could be caused by information asymmetry. Opportunism is to satisfy one's own self-interest or utility with guile (Williamson, 1975). Although no known studies have examined principal opportunism, it is reasonable to expect that it exists (Dawson et al., 2011). Shirking, the deliberate withholding of expected effort is also a form of passive opportunism, although it involves withholding

effort rather than information (Wathne and Heide, 2000). Hence, control of opportunism requires addressing the problem of information asymmetry (Dawson et al., 2016).

In any transaction (including ISPs and PPPs), the two parties (the principal and the agent) can unequally share relevant information (i.e., information asymmetry) (Sharma, 1997). Agency Theory recognizes the existence of such conflict of interest and incorporates alienability which suggests that incentives, asymmetric information, and/or coordination issues are important in understanding how organizations operate (Lambert, 2001). Information asymmetry could also exhibit in partnership agreements if the agent possesses some information that is valuable but unavailable to the market and principal, without which the market cannot identify the true nature of the activities (Barnea et al., 1981). As a result, an agent might misrepresent its abilities in order to enter into the predetermined contractual deals. This problem may arises because agents frequently have private, pre-decision information concerning their abilities, market conditions, and production costs (Waterman and Meier, 1998). To counter this asymmetry, both parties signal and screen information as they negotiate a consulting engagement (Dawson et al., 2016).

Relational contract violations occur in two forms: the inequitable sharing of emerging benefits and burdens and unilateral use of power (Dawson et al., 2011). In order to constrain such incidences, analysis of the impact of conflicting interests on deal decisions may base on two fundamental assumptions: (i) agents and principals behave according to their own self-interests; and (ii) each party's activities are rational and capable of forming unbiased expectations regarding their future wealth (Barnea et al., 1981). Further, if the agent to the relationship is assumed to be a utility maximizer, there is good reason to believe that the agent will use the incidence of information asymmetry for their interests (Jensen and Meckling, 1976). Consequently, principals should monitor or meter an agent to prevent opportunism (Williamson, 1985). Hence, control of opportunism requires addressing the problem of information asymmetry (Dawson et al., 2016). To address the research question of this study and to better understand the outcome of PPP arrangement in the Ethiopian Lehulu partnership, the potential for information asymmetry is examined. Comprehensively, Lubatkin et al. (2005) identify the transformational points where both opportunistic attitudes

and opportunistic behaviors reveal based on the role of both principal and agent relationship (see Figure 2-5).

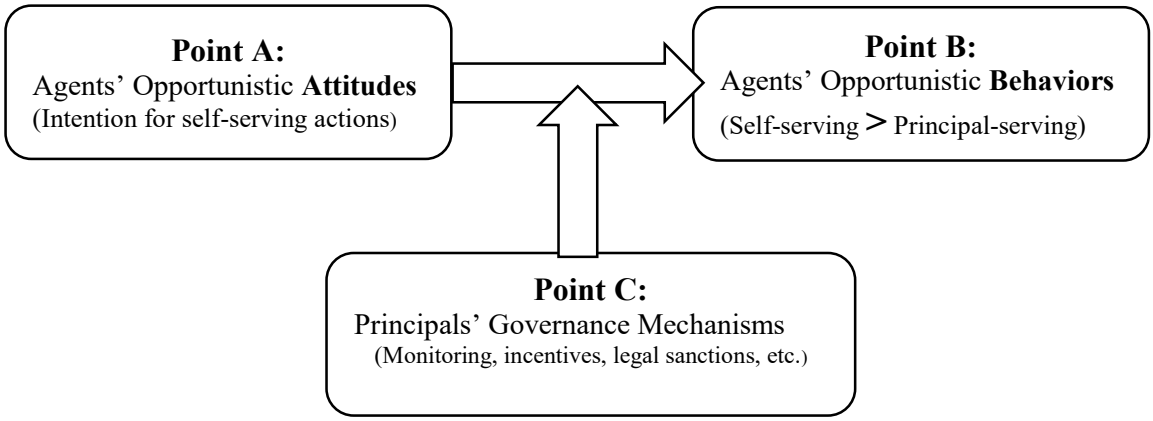

Figure 2-5: Agency Theory's view of Principal-Agent Relationship (Source: Lubatkin et al., 2005)

2.7 Critical Success Factors of PPPs

The concept of Critical Success Factor (CSF) was developed by Rockart (1982) and the Sloan School of Management. CSFs are defined as a method to make explicit the key areas that are necessary for management success (Boynton and Zmud, 1984). In project management, CSFs are also defined as factors which, if addressed, would significantly improve the chances of project implementation (Pinto and Slevin, 1987). CSFs have found to be appealing for information systems planning because they can help to justify the development of strategically important new systems, as the benefits of which may be hard to quantify (Peffers et al., 2003).

CSFs are characterized by researchers as: internal (endogenous) or external (exogenous) to the organization. The main difference between the two factors is that internal CSFs related to situations or issues within managers control while external CSFs may not be controlled. For instance, an internal CSF can be perceive as an action taken within the organization, while an external CSF can be an action performed outside the organization (Flynn and Arce, 1997). Since both internal and external factors may directly or indirectly influence PPP implementations, it is very important to examine the situation before getting into the realm

of partnership. In this regard, CSFs of a PPP can be consider as a key element which the PPP actors and stakeholders expecting to recognize it as critical for the success of their initiative. A number of empirical studies (e.g., Zhang, 2005; Cheung, 2009; Mohammed and Lindbergh, 2011; Babatunde et al., 2012; Ismail, 2013; Emmanuel, 2014) applied this concept to identify critical factors that could determine a successful PPP project in different contexts and countries.

On the other hand, others have attempted to explore both Critical Failure Factors (CFFs) and Critical Success Factors (CSFs) for PPP projects. For example, in their study, Zou et al. (2008) have identified both CFFs and CSFs for PPP projects (see Table 2-6).

Table 2-6: Critical Factors of PPPs (Source: Zou et al., 2008)

Critical Success Factors	Critical Failure Factors
Transparency of the process	Poor transparency
Competitiveness of the bids	Difference in interests and expectations
Technical capability of the bids	Inappropriate feasibility study
Good collaboration among stakeholders	Lack of government commitment and objectives
Credit enhancements	Complex decision-making
Effective procurement	Poorly defined sector policies
Appropriate risk sharing and management	Inadequate legal and regulatory framework
Government guarantees	Poor risk sharing and management
Stable policy regime	Low credibility of government policies
Strong market needs	Inadequate domestic capital markets
Favorable economic conditions	Lack of competition
Available financial market	sources at affordable rates
Developers' return commensurate with risks	Lack of mechanism to attract long-term finance from private
Reputation, trust and motivation	
Good public acceptance	
Reliable consortium with strong technical strength	

Based on a study conducted on PPP projects using questionnaire surveys, five CSFs are identified by Zhang (2005) namely: favorable investment environment; economic viability; reliable concessionaire consortium with strong technical strength; sound financial package; and appropriate risk allocation via reliable contractual arrangements. Similarly, Cheung (2009) lists the following eighteen critical factors that could determine the success of a PPP

project, namely: favorable legal framework, stable macroeconomic condition, sound economic policy, available financial market, appropriate risk allocation and risk sharing, commitment and responsibility of public and private sectors, strong and good private consortium, good governance, project technical feasibility, shared authority between public and private sector, political support, social support, well organized and committed public agency, competitive procurement process, transparent procurement process, government involvement by providing guarantee, and realistic assessment of cost and benefit.

Likewise, five CSFs are identified by Mohammed and Lindbergh (2011) based on the study conducted on PPP projects in Kuwait construction industry, namely: effective procurement; project implement-ability; available financial market; government guarantee; and favorable economic conditions. In the same way, nine CSFs are identified by Babatunde et al. (2012) based on the study conducted on PPP initiatives, namely: competitive procurement process; through and realistic assessment of costs and benefits; favorable framework; appropriate risk and risk sharing; government involvement by providing guarantee; political support; stable macro-economic conditions; sound economic policy; and availability of suitable financial market. Consistently, other relevant studies in the same way have attempted to identify CSFs for PPP initiative in different contexts. For example, five CSFs recognized by Ismail (2013) based on the study conducted on PPP implementation in Malaysia, namely: good governance; commitment of the public and private sectors; favorable legal framework; sound economy policy and availability of finance market.

The Nigerian PPPs were studied by Emmanuel (2014) and ten CSFs are identified based on the study conducted on different PPP projects in the country. The finding show that the CSFs are: project management expertise; transparent and sound regulatory framework; comprehensive feasibility study; commitment; private sector financial capability; integrity; government guarantee; long term planning; effective communication; and realistic cost/benefits assessment. In the same study other sub-factors are also included, namely: transparent procurement process; good governance; well organized public agency; sound economic policy; political stability and supports. In general, one may easily perceive that a thorough review of all critical factors could aid to initiate any type of PPP in any given

context such as potential ISPs. In sum, the overall process of a PPP procurement at least incorporates five stages, as depicts in Figure 2-6, namely: identify PPP project, structure and apprise PPP, design PPP contract, manage PPP transaction, and manage PPP contract (World Bank, 2012).

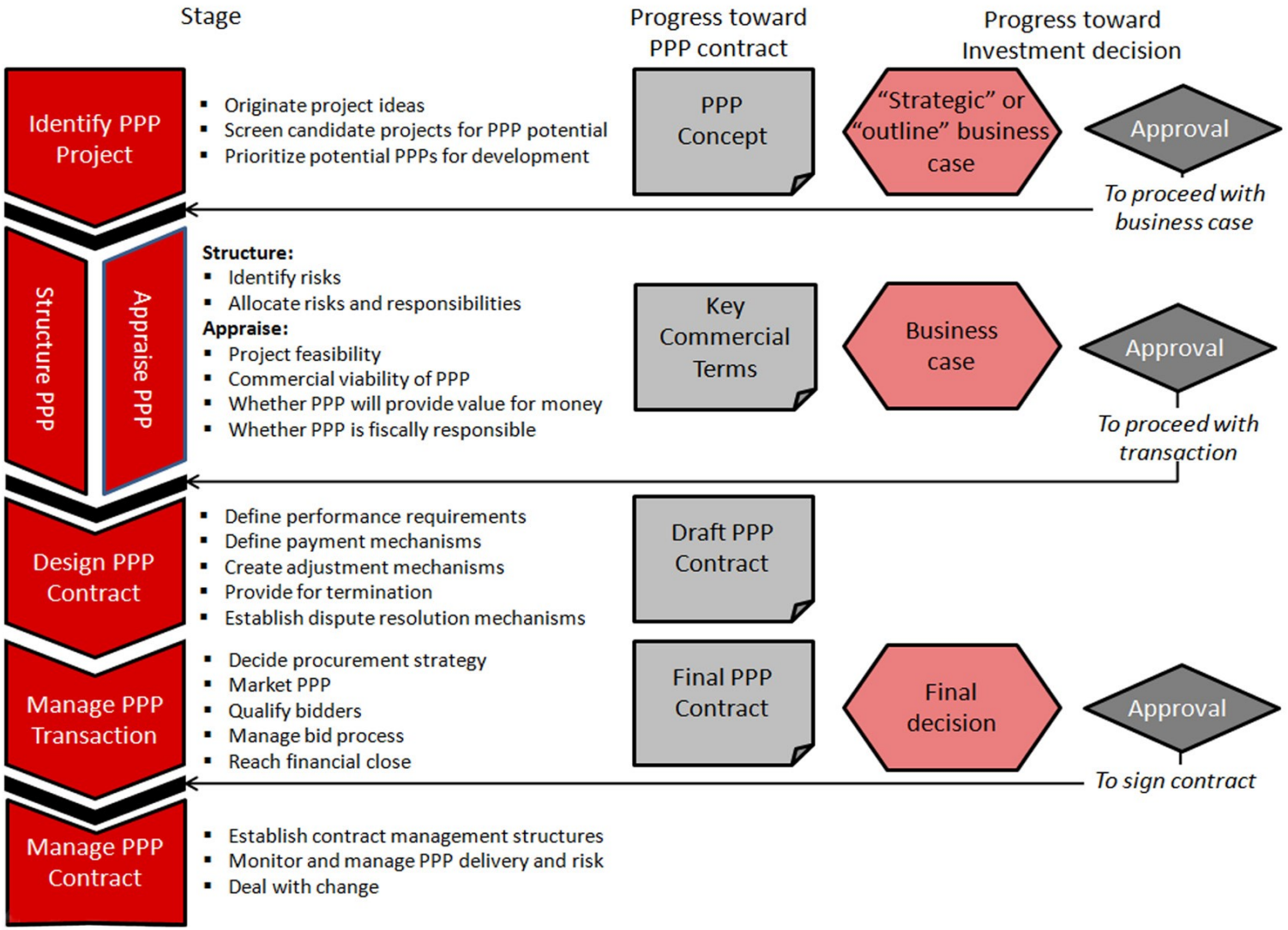

Figure 2-6: The PPP procurement process (Source: World Bank, 2012).

In this dissertation, after reviewing different PPP studies, pertinent findings of CSFs are extracted and viewed in two dimensions namely: Technical Critical Success Factors (TCSFs) and Multidimensional Critical Success Factors (MCSFs) which are presented in 2.7.1 and 2.7.2. The study has also investigated in depth both CSFs (i.e., TCSFs and MCSFs) and later the determining factors are examined and collapsed into a list of both TCSFs and MCSFs by merging similar items and finally reported how often each has been identified by researchers. The full report is also presented in Table 2-7.

2.7.1 Technical Critical Success Factors (TCSFs)

Technical factors are factors that have an impact on how a project operates within the project development process (Doherty, 2012). Regarding ISP implementations, the issue of technical factors can be alleviated with proper management of people and process practice (Nasir and Sahibuddin, 2011).

The term technical implementation means ensuring that the system development is completed and that the system functions adequately in a technical sense (Walsham, 1995b). The technical dimension covers both technology and information elements (El Khatib, 2014). In this regard, there is a new understanding of success factors associated with the technological dimension due to the technical challenges that vary with the nature of the project (Yeoh and Koronios, 2010). Thus, it is important to get more insights and identify the dimension of technical critical success factors (i.e., TCSFs) (El Khatib, 2014).

Some researchers (Nasir and Sahibuddin, 2011; Jennex and Adelakun, 2003; Cleland and Ireland, 2002) classified the dimension of technical critical success factors as vital CSFs. For example, Nasir and Sahibuddin (2011) in their study extracted seven TCSF including being familiar with technology/development methodology, complexity, project size, duration, number of organizations involved, supporting tools and good infrastructure.

After a qualitative research conducted on IS projects, El Khatib (2014) highlights the different dimension of technical critical success factors which are included software and

hardware features, business intelligence applications, database and repositories, operating system, protocols and standards, networking applications, tacit knowledge management, and technical staff retention.

Kwak (2002) also attempts to identify TCSFs which are associated with technical factors that may prompt technical challenge to projects namely: technical design, engineering, procurement, construction, equipment installation, and operation of the equipment and its compatibility with accomplishment of the project objectives. Similarly, Thomas and Fernández (2008) while investigating IS project success in Australian organizations, they underline that TCSFs are one of the success criterions in IS projects. In sum, as TCSFs are crucial determining factors in the arrangement of an IS partnership agreement such as PPPs, partners and stakeholders are recommended to frame the technical boundaries in every phase (for e.g., BOOT) of their ISP initiative.

2.7.2 Multidimensional Critical Success Factors (MCSFs)

Under the objective to study and develop a multidimensional framework for assessing project success, Shenhar, et al. (2001) investigate that how different dimensions mean different things to different stakeholders at different times and for different projects. Concerning ISPs, since systems development is, in essence, a multidimensional change process it may takes place simultaneously within several related social environments (Butler and Fitzgerald, 1999). In this regard, the multidimensional aspect of IS is regarded as one of the most important factors of success (Imtiaz et al., 2013).

As the original application of the CSF concept and method for defining the information needs of executives, the CSF approach has been applied by practitioners and researchers in a number of areas (Bryers and Blume, 1994). For instance, in their study on extracting multidimensional factors, Darwish and Rizk (2015) classify success factors into main success factors where each main success factor is decomposed into a set of sub success factors which such classification helps in reaching to a multidimensional view of CSFs and makes them more applicable. Moreover, Nasir and Sahibuddin (2011) in their study on

extracting multidimensional factors, they merge different categories of CSFs into people factors and process factors.

In an academic context, researchers demonstrated that the CSF concept is interpretive in character and as such it may be employed for research on the systems development process (Butler and Fitzgerald, 1998). CSFs (i.e., MCSFs) are interrelated and mutually dependant and are likely to change across time (Koutsikouri et al., 2006). Thus, at a practical level, the CSF approach helps the researcher and practitioner abstract from the complex, multidimensional reality of business activities, such as systems development, and focus on core activities that are vital for success (Butler and Fitzgerald, 1999).

Contextually, a proper understanding of the theoretical underpinnings and the multidimensional critical success factors to successful IT/IS projects would be of considerable practical value to emerging economies (Ugwu and Kumaraswamy, 2007). As there is a need for a more multidimensional view of success is needed for projects (Shenhar et al., 2001), a study on CSF helps scholars and practitioners to extract from the multidimensional processes and core activities that are essential for success (Butler and Fitzgerald, 1999). In sum, MCSFs, as crucial determining factors in the arrangement of an IS partnership agreement such as PPPs, partners and stakeholders are recommended to consider each factors for the success of their IS initiative.

Next, in Table 2-7, the researcher has compiled and presented both factors which are discussed in 2.7.1 and 2.7.2.

Table 2-7: Summary of Critical Factors of PPPs (Source: compiled by the researcher)

MCSFs (**) and TCSFs (*) of PPPs	Author(s)
**Favorable investment environment	Zhang (2005); Zou et al., (2008); Mohammed and Lindbergh (2011)
**Favorable and sound legal framework	Emmanuel (2014); Ismail (2013); Babatunde et al. (2012); Cheung (2009)
**Sufficient financial market and credit	Zou et al., (2008); Emmanuel (2014); Zhang (2005); Babatunde et al. (2012); Cheung (2009); Mohammed and Lindbergh (2011); Ismail (2013)
**Sound economic viability and policy	Babatunde et al. (2012); Zhang (2005); Cheung (2009); Zou et al., (2008); Ismail (2013); Emmanuel (2014)
**Reliable concessionaire and private consortium	Zhang (2005) Cheung (2009)
**Appropriate risk allocation and sharing	Babatunde et al. (2012); Zhang (2005); Cheung (2009); Zou et al., (2008)
**Reliable contractual arrangements	Zhang (2005)
*Strong project technical feasibility and management expertise	Emmanuel (2014); Zhang (2005); Cheung (2009); Mohammed and Lindbergh (2011); Zou et al., (2008)
**Competitive and transparent procurement process based on realistic cost-benefit assessment	Zou et al., (2008); Babatunde et al. (2012); Cheung (2009); Mohammed and Lindbergh (2011); Emmanuel (2014)
*Comprehensive technical feasibility study	Emmanuel (2014)
**Long term planning	Emmanuel (2014)
**Stable macroeconomic condition	Cheung (2009); Babatunde et al. (2012)
**Commitment, collaboration, shared authority and responsibility between public & private sectors	Zou et al., (2008); Emmanuel (2014); Cheung (2009); Ismail (2013)
**Good governance policy	Ismail (2013); Cheung (2009); Emmanuel (2014); Zou et al., (2008)
**Political stability and government involvement	Cheung (2009); Babatunde et al. (2012); Mohammed and Lindbergh (2011); Emmanuel (2014); Zou et al., (2008)
**Social support and public acceptance	Cheung (2009); Zou et al., (2008)
**Integrity and transparency of the process	Zou et al., (2008); Emmanuel (2014)
* + **Effective communication	Emmanuel (2014)
**Reputation, trust, and motivation	Zou et al., (2008)

2.8 Knowledge Management in PPP

Politicians and public service workers use knowledge to shape their domestic environment and try to make a difference (Bridgman and Davis, 2004). Knowledge is a socially constructed phenomenon because: (i) it is created through actions and interactions of people (Nonaka, 1994; Andrade, 2009); (ii) it is context dependent and might little meaning outside of its cultural contexts (Weir and Hutchings, 2005) and (iii) it is dynamic and is modified through actions and interactions of the society (Andrade, 2009).

As the relationship between governmental agencies and stakeholders is most important to knowledge construction, knowledge needs to be effectively captured and embodied within the government system (e.g. within its processes, practices, culture), disseminated, and finally applied to create (improve) public services (Riege and Lindsay, 2006). Knowledge accumulation has also been favored by the setup of dedicated PPP government units in various countries to create centers of expertise on PPP projects (e.g., Central PPP Policy Unit in the Department of Finance in Ireland, the Unita' Tecnica della Finanza di Progetto in Italy, Partnership UK in the UK), and by the diffusion of best practices on risk assessment and risk allocation (Iossay and Martimort, 2011).

Appropriate knowledge management practices, guided by a clear vision, can be used to develop more effective policy partnerships with stakeholders (Wiig, 2002). This is particularly important for governmental agencies where people are the key knowledge repository, thus, governments need to ensure that they encourage a participative culture at all levels, including formal and informal communications (McAdam and Reid, 2000). For example, some governmental public sectors with ill-equipped service delivery infrastructure are at risk of underdevelopment and poor delivery of PIS to their citizens unless they start working in partnership with the private sector. Hence, the primary purpose of governmental agencies and stakeholder partnerships is mainly the facilitation of the effective transfer of scientific-based and socially-based knowledge, held by stakeholders, to governments (Riege and Lindsay, 2006).

In general, knowledge is classified as tacit and explicit by its mode of representation and by its possession as individual, group, and organizational knowledge (Nonaka, 1994). Knowledge transferred in the government and stakeholder partnerships largely derives from social interactions. Thus, it may take on a tacit form and is based conceptually (Wiig, 2002). A very good example could be an understanding of the procedures of negotiation, explicit knowledge, which does not guarantee someone to be an effective negotiator; that expertise requires to practice and master in order to accumulate tacit knowledge. Thus, to properly initiate and manage information systems projects (such as PIS) under a PPP pact, both explicit and tacit knowledge are required. As shown in Table 2-8, using both types of knowledge, Bassellier et al. (2001) identified the typology for categorizing information systems knowledge.

Table 2-8: Typology for Categorizing IS Knowledge (Source: Bassellier et al., 2001)

Type of knowledge	Component	Specific elements
Explicit	Technology	• Current and emerging technologies • Current technology assets • Competitors' use of technology
	Applications	• Current and emerging applications • Current assets
	System development	• Development methodologies • Project management practices
	Management of technology	• IS planning and business deployment • Resource allocation
Tacit	Experience	• Personal use of computers • IS project management experience • Management of IS
	Cognition	• Process adaptiveness • Vision of the role of IS in the organization

In the course of a PPP arrangement, possessing both tacit and explicit knowledge of project management is also one of the core ingredients and mandatory proficiency among all partners for properly managing the partnership venture. On the other hand, if partners are unable to constrain and handle any form of knowledge gap, as a result, intentionally or unintentionally, either the agent or the principal can take advantages over the other party at

any given time during the PPP implementation process. Unquestionably, unfair partnership agreement decisions may associated with information asymmetry, which results in creating a joint disadvantage for the public values and capitals rather than establishing a win-win scenario. Such differences might possibly be the effect of a bilateral information gap, lack of organizational capacity, and knowledge gap. Since information asymmetry is bilateral (Dawson et al., 2016), an opportunistic behavior may often manifest itself among the partners any time during the partnership process. For instance, if lack of transparency exists in the details of the partnership arrangement, then both partners might seek benefits caused by the asymmetry. Gradually, as a result such mounting trends in the partnership pact, the partnering organizations might exert unnecessary costly efforts and overtly ambitious will. Consequently, if the risk of opportunism is high, organizations tend to divert considerable amount of resources to control and monitor for it (Wathne and Heide, 2000). Therefore, based on the typology for categorizing information systems knowledge, a typology for categorizing the knowledge needed for PPP projects is mapped and exhibited in Table 2-9.

Table 2-9: Typology for Categorizing IS Knowledge of Public/Private Sector (Inspired by: Dawson et al., 2011; Bassellier et al., 2001)

	Explicit IS knowledge Component	**Tacit IS knowledge Component**
Private Sector	• Technology • Applications • Systems development • Management of technology	• Experience • Cognition
Public Sector	• Systems development • Management of technology	• Cognition

In sum, governments need to focus on building long-term trusting relationships based on knowledge sharing routines that could eliminate fears of opportunism (Parise and Henderson, 2001). If properly addressed, governments can form different types of knowledge-based partnerships with stakeholders, ranging from a simple exchange of information through to full collaboration, based on shared resources (Riege and Lindsay, 2006).

2.9 PIS Provision by means of PPP

Unlike their private sector counterparts, public sector organizations were created by governments to properly deliver vital public service for citizens. The main difference between private sector and public sector is that the former directs its interest to shareholder value creation, that is *private-value* generated by the owner's interests, however, the latter focuses on public value, which public sector provision targets, related to the achievement of objectives set by government programs, the delivery of services to citizens, and the value of use of public goods by the contribution of actors to agendas of the public government (Matthews and Shulman, 2005).

Recall the description given in section 1.2; channels of service delivery are the ways of communication through which a service is delivered to the citizens (Sousa and Voss, 2006). It is also the way by which a citizen requests a basic public service and receives the resultant output from service providers (Harfouche and Kalika, 2009). In this regard, PIS delivery, as one of the vital public services, literally refers to the use of technology to enhance access to and efficiently deliver government information and services (Brown and Brudney, 2001). PIS is a use of information and communication technology as a tool to achieve better government (Davies, 2015; Bhatnagar, 2014; Alshehri and Drew, 2010; Ogbomo and Ogbomo, 2008). It incorporates an implementation of cost effective models for citizens, industry, employees, and other stakeholders (Whitson and Davis, 2001). In general, there are four primary delivery models whereby a government may interact with other government, citizens, its employees, and businesses (see Figure 2-7): Government-to-Citizens (G2C), Government-to-Government (G2G), Government-to-Business (G2B), and Government-to Employees (G2E) (ITU and OECD, 2011).

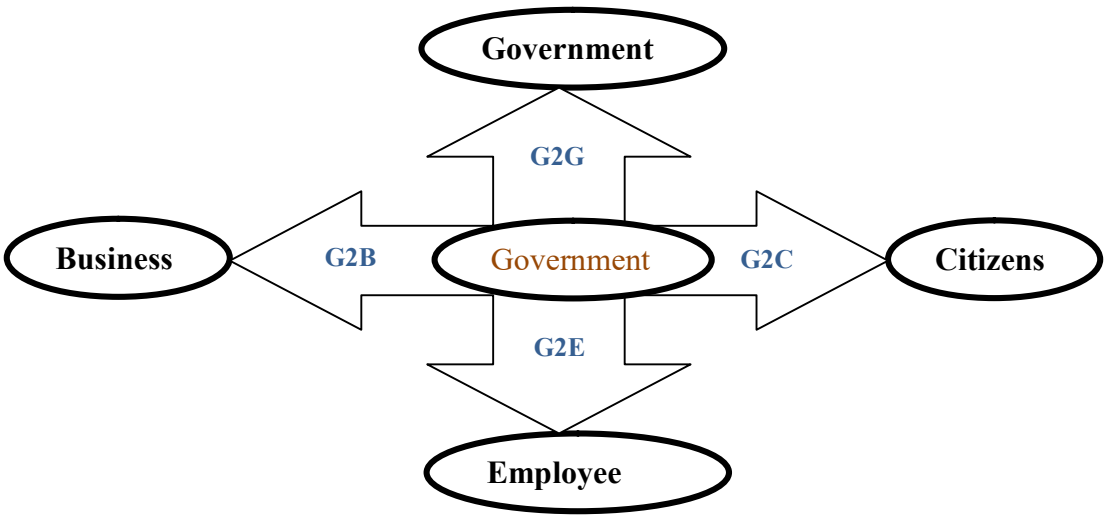

Figure 2-7: Information delivery models (Source: ITU and OECD, 2011)

Despite the fact that public service provision should emphasize value delivered to citizens, PPPs, outsourcing, and building shared service centers within public organizations are driven mainly by concerns for lowering costs or at least decreasing deficits (Cordella and Willcocks 2009). For instance, Electronic Government (e-Government) and Electronic Services (e-Services) are increasingly replacing the traditional means of accessing public services via personal visits, phone calls, and the main delivery with new dimensions such as: online information tools, electronic services like searchable databases or text messaging services, outlines of privacy and security policies, foreign language and disability access, and public outreach based on the variety of features such as e-mail or search functions that help citizens contact government officials and utilize information on web sites (West, 2005). As a result of such demand, to improve and empower the vital public services stakeholders including PIS providers, authorities, citizens and the private sector may start to communicate with each other formally or informally as illustrated comprehensively in Figure 2-8.

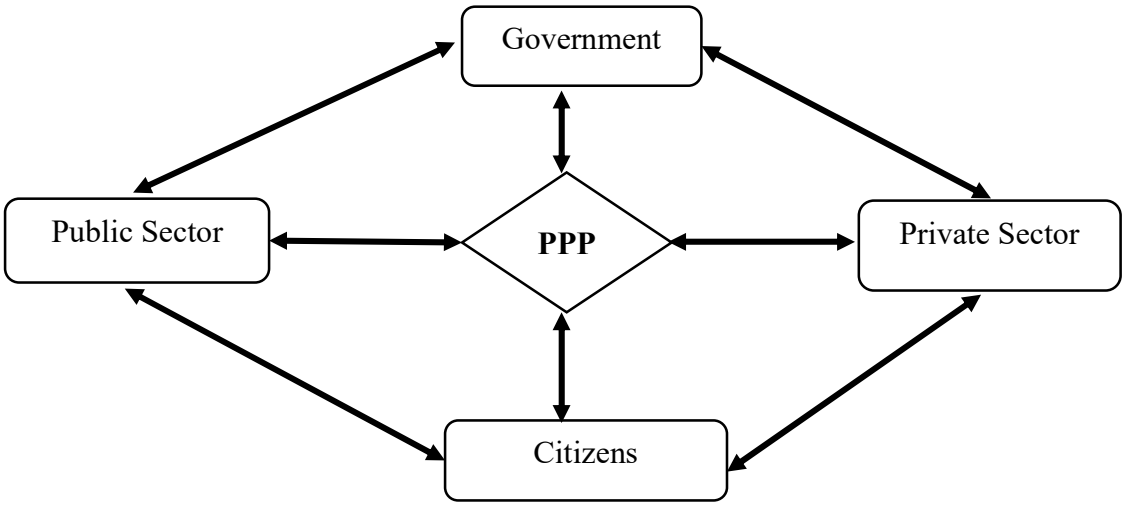

Figure 2-8: The view of PIS Provision using PPP (Inspired by: ITU and OECD, 2011)

2.10 PPP Initiatives in Developing Economies

Nowadays, a central theme in both developed and developing countries has been an increasing level of delegation to the private sector for the provision of public services (Iossay and Martimort, 2011). However, in comparison, unlike the developed economies, the developing economies experience on PPP implementation for ICT initiatives seems immature. While many developed economies have identified successful PPP strategies for empowering their PIS, the main challenges of PPP arrangement in the developing economies are political instability and fluctuation in policy (Hussen, 2013). Other challenges are unable to promote the five attractions for the private sector to engage in PPP, namely: government financing, government sponsorship, government guarantee, tax exemption/reduction, and incentive of new market penetration (Cheung, 2009). Furthermore, lack of national PPP framework is also the other challenge that has a direct impact on initiating PPPs for ISPs.

PPP framework means the policy, procedures, institutions, and rules that together define how PPPs will be implemented on a one-off basis, without any specific supporting policy framework (World Bank, 2012). Some developing countries have developed a successful PPP program based on their sound PPP framework such as South Africa, Tanzania,

Mauritius, Egypt, India, Philippines, Indonesia, Chile, and Peru. Table 2-10 presents selected African countries' PPP legal and regulatory framework.

Table 2-10: Selected Developing Countries' PPP framework (Source: World Bank, 2012)

Developing Country	Specific PPP regulatory framework
South Africa	The Public Finance Management Act (No.1, 1999) is the enabling legislation for PPPs. In accordance with this Act, the National Treasury issued Treasury Regulation 16 (Gazette #25915, 2004) to the Act, "Public private partnerships", which establishes the rules for the nation's PPP program. * PPP approvals are made by the Treasury. Projects are submitted for approval at four points, after: (1) the feasibility study has been completed, (2) the bid documents have been prepared, (3) bids have been received and evaluated, and (4) negotiations have concluded and the PPP in its final form
Tanzania	The PPP Act (Gazette of the United Republic of Tanzania No. 13 Vol. 91, 2010) sets out the responsibilities of the private and public sectors, the functions and powers of the PPP Unit, and the approval process for PPPs
Mauritius	The PPP Act of 2004 (Gazette of Mauritius No 113, Act No. 37 of 2004) establishes the PPP Unit, defines the responsibilities of implementing agencies, and defines the key elements of PPP-related agreements and studies
Egypt	Executive Regulation of the law regulating Partnerships with the Private Sector in Infrastructure Projects, Services and Public Utilities, Prime Ministerial Decree No. 238 of 2011. * Part Three sets out in detail the "tendering, awarding, and contracting" procedures for PPPs, including pre-qualifications, tender stage, competitive dialogue, awarding and contracting procedures, and an approach for appeals.
Ethiopia	Not yet established*

Although the progress of PPPs in developing economies lags far behind developed economies, for years this was considered as a state failure or lack of PPP capacity in general. Comparatively, basic conditions in developing economies differ fundamentally from those in industrial countries. The argument is that PPPs in developed economies are better able to produce the intended results because of more favorable environmental and administrative conditions. For example, it seems not right to perceive that just because some conditions are met for sectoral collaborations it does not mean that ensures a successful ISP project under PPP implementation. In short, if there is not enough political will and

technical expertise, even conducive environmental circumstances cannot prevent project failure, as experienced in the industrial countries (Schuppan, 2009). In general, developing countries expect to learn and act on the drivers of successful PPP adoption or implementation for national PIS projects. Some potential drivers are (Cheung, 2009):

- Economic development demands more facilities;
- The shortage of public funds are unable to satisfy development needs;
- Social pressure empowers facilities improvement and high quality service required;
- There is a need of private incentives;
- There is shortage of government funding;
- There are public sector inefficiencies and a lack of competition;
- To avoid public investment restrictions; and
- Lack of business and profit making skills inhibit in the public sector.

On the other hand, to curb the failure of alliance initiatives, a context-oriented approach seems to be a more promising route to the successful implementation of PIS projects under a PPP model. For instance, Heeks (2002) classifies the developing economies' electronic services projects into three status of failure-success categories: (a) total failure in which a new system never gets implemented or is implemented but is abandoned immediately; (b) partial failure in which the major goals are unattained or in which goals are attained for some stakeholders but not all, and; (c) success in which all major goals are attained for all stakeholders. In conclusion, though a PPP model is widely used for different purposes by the developed world, the adoption of such alternative PPP strategies for public infrastructure and electronic PIS transformation seem still in infancy stage in the developing world.

2.11 PIS Provision Using Governmental Mobile Applications

IS in public sector has an important role in facilitating the provision of PIS and further public service delivery patterns. It has also an impact on the overall public service performance such as: (i) linking governmental bureaus all over the nation and providing various public services; (ii) serving millions of citizens regardless of their geographical

locations; (iii) guiding public servants and their management to make sound public decisions; and (iv) eliminating local communication barriers etc. Realizing such facts, citizens of the underdeveloped nations including Ethiopians in the twenty-first century demand access to electronic channels of basic public service delivery systems, despite their ICT infrastructure, knowledge and energy limitations.

In order to deal with the demand of citizens for better public service development, nowadays governments are focusing on alternative sim-based and sim-less mobile-Services (m-Service) by integrating with mobile Applications (hereafter referred as 'Apps'). Unquestionably, free Android Apps, unlike the Conventional-Government (c-Government), are very important channels to deliver electronic public service to citizens for twenty-four hours a day and seven days a week (see Table 2-11). In definition, the use of mobile and wireless communication technologies within government administration to offer public service to citizens and businesses has become commonly known as mobile-Government (m-Government) (Zefferer and Teufl, 2011). However, the adaptive challenges of m-Government implementation go beyond technology, as it also call for organizational structures, skills, new forms of leadership, and transformation of public institutions (Allen et al., 2001).

Table 2-11: Contrast of c-Government, e-Government, m-Government (Source: Uhm, 2010)

Item	c-Government	e-Government	m-Government
Principles	• Bureaucratic Process (Phone, fax)	•Process reengineering using ICT (PC, Internet)	• Seamless integration and wireless linkage
Service time	• 8 hours a day, 5 days a week	•24 hours a day, 7 days a week	• 24 hours a day, 7 days a week
Service space	• In-person visit, fax, phone	•Customer's home and office using Internet	• Customer's location and physical place
Service form	• Several visits to offices	•Multi-clicks to web portals	• One time access to needed service

2.11.1 Potentials of Governmental Mobile Apps for the Ethiopian PIS Provision

As one of the electronic governmental channels that facilitate the communications between citizens and public agencies, m-Government Apps are believed to have the potential to

improve vital public service delivery. Such ubiquitous mobile connectivity potentials of m-Government recognized by many to support and advance considerable improvements from economic to social development, from public governance to public service and information delivery, and from public sector performance to citizen engagements (ITU and OECD, 2011). Mobile technologies, especially, mobile phones that can be used to access the Internet and perform such activities beyond voice data alone, have become the computers in the pocket of many citizens in the developing countries (Ogunleye, 2010). This new focus shift of governments toward m-Government applications, which is an extension of e-Government, is primarily concerned with the delivery of government service through mobile devices and mobile technologies (Bannister and Remenyi, 2003). Being aware of this fact, to continue accelerating the ongoing developmental transformation efforts of the Ethiopians, governmental Apps seem to have a great role in order to efficiently address the ever growing PIS demand of citizens.

Relatively, in light of the widespread advancement of mobile communication technologies, most industrialized nations such as the Republic of South Korea, United States, Sweden, Canada, and Australia have already established m-Government initiatives (Kim et al., 2004). However due to multidimensional challenges, Ethiopia has started late transforming its telecom and electronic public service delivery to change its longstanding image of poor telecom infrastructure development. Some of the multidimensional challenges, for example, are similar to that of the typical e-Government challenges which are naturally shared by the m-Government initiatives including infrastructure development, privacy, security, legal issues, mobile penetration rate, and accessibility issues (InfoDev, 2002). Hence, it is timely to examine the implication of state based mobile Apps development and public service delivery transformation in Ethiopia.

Ethiopia has only one mobile operator, which belongs to its government. New commercial 4G networks were launched in the 2014 for the first time in Ethiopia (GSMA, 2015). As the country has totally blocked foreign or local private cellular operators, it is a laggard in terms of digital innovation and Apps development. Though figures show that the mobile industry in the Sub-Saharan Africa region continues to scale rapidly, Ethiopia still closes its doors to

international mobile industries to invest telecom inside the country. For instance, in Sub-Sahara Africa mobile phone subscriptions reached 367 million in mid-2015, due to falling device prices encouraging the rapid adoption of smart-phones, with the region set to add more than 400 million new smart-phone connections by 2020 (GSMA, 2015). However, in Ethiopia, although the numbers of mobile subscribers is on the rise to forty million subscriptions in 2017 (see the statistics in Table 2-12), it still lags behind advances in mobile Internet communication technologies, for example, its sluggish Internet speed and access to less than 1.5 percent of national Internet users (UN, 2014).

Table 2-12: Telephone Users and Internet Users in Ethiopia (Source: Seyuom, 2013)

Items	2009	2010	2011	2012	…	**2017**
Mobile telephone	4,051,703	6,854,000	14,126,659	19,000,000	…	**40**,000,000
Land-line telephone	915,058	908,882	829,008	1,000,000	…	**8**,500,000
Internet users	35,606	74,557	72,422	360,000	…	**7**,200,000

2.11.2 Private Sector's Role for PIS Mobile Apps Development in Ethiopia

As public agencies of many developing countries continue facing complex challenges of improving the delivery of basic public service to their citizens and effectively serving their population, the role of the private sector is crucial. The private sector's mobile Apps developers can contribute their share by designing and producing vital public service Apps for the public sectors in particular and governmental agencies in general. Encouraged by a strong demand for multi-channel service delivery, many rich and poor countries around the world are now offering m-Government services to improve interactions with the public, taking advantage of an advanced, stable, and well-developed wireless infrastructure that has been installed by governmental and private mobile operators (Al-Hujran 2012).

Nowadays, the private sector's role could cover wide areas of cooperation and arrangement between regional governments, public sectors, local communities, and other stakeholders to deal on matters such as addressing quality public information demands of citizens and facilitating better service deliveries to citizens. In order to ensure satisfaction of citizens, the major benefits of the private sector for the public in general and the government in particular

are: (i) the delivery of instant, efficient and effective tools, and (ii) the quality of public services which associated from simple governmental based business practices to a full-fledged public service. In this regard, the involvement of the private sector in public service delivery also supports the business process to be transparent and competitive; as a result, the long-term costs of the service delivery can be assessed more realistically which in turn promotes efficient use of resources (Hussen, 2013).

Generally, the private sector is nowadays increasingly being seen as a remedy to several electronic and m-Government related challenging problems that are associated with mobile Apps development and m-Service initiatives. Unquestionably, free Android Apps, as optional m-Services model, are important channels to deliver public service to citizens. In this regard, the private sector's mobile Apps developers could contribute their flexible expertise to the public sector Apps development if a window of opportunity is available for partnerships. Since working in partnership with the public sectors would allow some risks to be transferred to the private sector, hence the parties best able to manage projects can result in gains of better performance and productivity (Zou et al., 2008). For instance, the MCIT informed that it has received applications from 218 firms to provide Value Added Services (VAS) since the government gave approval for private firms to offer non-voice services, but it is not certain how many firms the government intends to award concessions (Deloitte and Touche, 2014). Although, technology is often the *scapegoat* within an unsuccessful partnership (NASCIO, 2006), it is highly recommended initiating a PPP which might directly influence the ongoing or future state based mobile Apps development in Ethiopia.

2.11.3 Potential Challenges of PIS Mobile Apps Development in Ethiopia

Ethiopia has recently started transforming its basic public services delivery and changes its longstanding image of poor ICT infrastructural development. Business process re-engineering (BPR) exercises have been carried out by the public service sector in order to modernize government in Ethiopia, however some key points arising from these implementations include that management heavily relies on the rules, procedures, and regulations of the regulatory agencies (World Bank and AfDB, 2012).

Ethiopia's recent achievements demonstrate that a vibrant online public administration can emerge from a combination of high-level political commitment, engagement of stakeholders and a specific plan of action linking e-government to national sustainable development priorities (UN, 2014). A study, for instance, shows that CSFs of mobile information systems and m-Government development in Eastern Africa can be regarded as service delivery factors (relevance, cost, integration, equality, performance) and sustainability factors (build on e-Government, efficiency gains, stakeholders' commitment, scalability, openness, innovation) (GSMA, 2015). However, unable to address the CSFs in a timely way might inhibit the adoption and implementation of the m-Government initiative in general.

The global mobile Apps development and m-Government adoption is continuing growing in most African nations, including Ethiopia. As one of the fast growing economies, improving the overall public services delivery systems are among the current focus of the Ethiopians. In fact, Ethiopian actors are recently started giving due attention to fulfill and achieve better governmental service delivery channels to the nation by considering alternative m-Government Apps for delivering vital public m-Service for citizens. For example, the national e-Government strategy of the country includes provisions for citizen centric mechanisms for stakeholder involvement, implementation of 219 online services over a five-year period from 2011–2015 (UN, 2014). Though the country seem to known by its scarce resources and shortages of skilled manpower in information systems field, in order to address the challenging issues related with quality of public service delivery systems, m-Government Apps can potentially leapfrog the e-Government models and become an instant remedy for boosting public m-Service.

In sum, in order to achieve the sustainable development of Ethiopia and address the gradually growing demand for ICT infrastructural development, considerations of developing m-Government Apps and related m-Services is vital. Mobile texting systems, as one of the m-Services, can be used to alert and help citizens about specific public service delivery. For instance, the success of UNICEF's rollout of RapidSMS to improve supply chain management during the famine in Ethiopia could be replicated in similar situations in other countries, such as Somalia (World Bank and AfDB, 2012). Hence, SMS-based e-

Government should become a priority system for delivering e-Government service in developing countries (Susanto and Goodwin, 2010). In a nutshell, the prospect of public service delivery systems of Ethiopia can be realized and improved by adopting features of m-Service using Apps specifically designed for the public sector development.

2.12 Summary

This chapter indicates clearly the knowledge gap in the current body of knowledge on PPP in IS development. Moreover, this timely research in its literature review part attempts to investigate potential PPP factors from various literature which account for IS partnership success specifically in a developing economy context. For instance, Ethiopians have experiencing poor PIS for generations. Clear evidence from other countries show that the need to improve public IS service is addressed by working with potential ICT private firms under a PPP model. A lesson to be learned from others' experience cannot be left alone to Ethiopian practitioners. Thus, this section of the study has designed to examine the context. In general, to address the research objectives, this chapter has presented different sections of literature reviews which are relevant to the study. The next chapter, Chapter Three, addresses the research design and methodology of the study.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

This chapter describes the research design and methodology of the dissertation. It is designed in a way to iron out the research objective and present the dissertation's journey undertaken in addressing the research question presented in Chapter One. It addresses the research approach specifically strategized for conducting the Ethiopian PPP case. In the research design section of this chapter, the unit of analysis, selection of the research area, selection of the case, data collection, data analysis, and further issues concerning validity, reliability, and generalizability are presented. The pictorial research guideline is also depicted.

3.1 Research Paradigm

A research framework is contingent on a researcher's philosophical assumptions about the world and the context she/he is living. Such research philosophy can be considered as a reflection of a researcher's approach to understanding the world he/she investigates. Thus, the role of a researcher is to present and interpret the findings. The two heavily used philosophical positions are the positivist and interpretivist paradigms. These paradigms influence the choice of research methods/strategies to construct knowledge. These paradigms differ by the ontology and epistemology of knowledge (Darke et al., 1998; Walsham, 2006).

On one hand, interpretivists believe that, which is not the focus of this research, reality is a social construct that cannot exist independent of the knower (Orlikowski and Baroudi, 1991; Darke et al., 1998). Further, for interpretivists there is no objective truth that exists independent of the knower (Walsham, 2006). Thus, interpretivists adapt the constructionist approach as in most cases an interpretive research paradigm attends to the intangible contextual factors in information systems research (Burke, 2007).

On the other hand, with regard to ontology, positivism is premised on the supposed of existence of a priori fixed relationships among concepts underlying a phenomenon

(Orlikowski and Baroudi, 1991). As to epistemology, positivists claim that the researcher is independent of the knowledge construction process because inquiry is value free (Darke et al., 1998). Research under this paradigm often helps positivist qualitative researchers. For instance, a researcher may use it by defining concepts and relationships in advance to data collection and then collects empirical data to support or reject those concepts and relationships. In sum, the intent is to discover general principles that govern natural and social worlds (Orlikowski and Baroudi, 1991).

Since values are implicit which cannot be captured with an objective measurement instrument (Orlikowski and Baroudi, 1991), the involvement of researchers in the data collection process helps to capture the participant's values and views (Andrade, 2009). In this regard, positivist researchers are interested to discover patterns and relationships in the data unlike interpretivist researchers who are interested in constructing rich description of the phenomenon by incorporating diverse views (Miles and Huberman, 1994). In sum, the positivist qualitative approach is useful in studying a factual problem about the case in this study, for instance, the PPP partners' intention, feelings, beliefs, motivations and related factors. Thus, the positivist qualitative is suitable for this dissertation and employed accordingly.

3.2 Research Method

The choice of research method is influenced by the nature of the research problem, the researcher's philosophical assumptions, the researcher's skills and academic politics (Trauth, 2001). Qualitative research is appropriate for understanding complex issues (Mason, 2002). The strength of the qualitative research lies on its ability to gather in depth facts to examine the complex social phenomena in its holistic state rather than in isolation (Cresswell, 2007; Jonsson, 2007). There are different methods within the qualitative research paradigm such as ethnography, phenomenology symbolic interactionism, and case study (Hancock and Algozzine, 2006).

Qualitative research is more suitable for studies that are rich in detailed descriptions around context and processes (Kaplan and Maxwell, 1994). It may also be used for studying

selected issues, cases or events in depth and in details (Kohlbacher, 2005). As qualitative research seeks to describe and analyze the culture and behavior of humans and their groups, it is also a flexible and an effective research strategy to capture participants' viewpoints using interviews and discussions to develop the rich picture.

Conducting qualitative research requires considerable reflection on the researcher's part, and the ability to make a critical assessment of informants' comments. It involves debating the reasons for adopting a course of action, challenging one's own assumptions and recognizing how decisions shape the research study. The following guidelines are provided for the qualitative researcher (Mason, 2002):

- The research should be conducted systematically and rigorously;
- The research should be strategic, flexible and contextual;
- The researcher is accountable for its quality and claims;
- The researcher should engage in critical scrutiny or active reflexivity; and
- The researcher should produce convincing arguments.

In sum, qualitative research is the most appropriate approach for studying a wide range of social dimensions, while maintaining contextual focus (Mason, 2002). As the analysis is also mediated by the researcher from the perspectives of various actors who involved actively (Walsham, 1993), a positivist qualitative research method definitely fits for this study.

3.3 Research Strategy

A research strategy is concerned with the high-level framework used to address the research questions (Saunders et al., 2009). At a broad level, strategy involves determining the researcher's philosophical approach (Remenyi et al., 1998). Such strategy include laboratory and field experiments, in-depth and large-scale surveys, case studies, ethnography, action research, focus groups, simulation, forecasting, role playing, scenario discussions, participant observation and so on (Galliers, 1992; Saunders et al., 2009). Assumptions underlying a research philosophy can be understood in terms of a researcher's beliefs about

physical and social reality, the notion of knowledge, and the relationship between theory and practice (Orlikowski and Baroudi, 1991).

A study may be cross-sectional or longitudinal, exploratory, descriptive or explanatory (Saunders et al., 2009). A case method, for instance, supports both theory building (Yin, 2009) and theory testing (Eisenhardt, 1989). Specifically, case study method's support for theory building is particularly useful in areas where existing theoretical and conceptual frameworks are inadequate (Chetty, 1996). One may realize that the process of selecting suitable research strategy may depend on the different philosophical positions. For example, this research, which is a single case study within the positivist qualitative philosophical assumptions of information systems studies, is selected with a belief to understand deeper the theoretical insights that are needed to re-conceptualize information systems partnership success and to rationalize in what way the practical transformation of poor PIS delivery initiatives are treated in developing economies, specifically in Ethiopia.

Novice researchers, as highly recommended by Yin (2009), may begin with a simple and straightforward case study because of the complexity of managing and analyzing the large volumes of data. Case study research also happens to be appropriate to investigate contemporary phenomenon within its real-life context, when the boundaries between the phenomenon and the context are not clearly evident, to study how and why questions, and when multiple sources of evidence are needed (Yin, 1994). A single case study research method is selected for this study for the following reasons (a) the case is intermingled with its context, (b) it investigates multiple realities (as this is a multiple-case study) in its holistic state, (c) it investigates a phenomenon in its natural setting, (d) it is used for exploration (proposition development), (e) it employs triangulation (multiple sources of evidence and data collection), and (f) it investigates the properties of a single or few phenomena (for more see Gerring, 2007; Eisenhardt, 1989a; Darke et al., 1998, Yin, 2003; Benbasat et al., 1987).

A case study is a common method that is widely accepted in information system research (Myers, 1998; Pan and Tan, 2011; Hsu, 2006). Case study research can be undertaken under

positivist or interpretivist or mixed paradigm as well as single or multiple cases (Siggelkow, 2007; Andrade, 2009). Particularly, the discussion of Siggelkow (2007) on persuasiveness provides a compelling argument for the appropriateness of the case study design to contribute to a deep understanding of the phenomenon being studied. A positivist qualitative case study research method is selected for this study for the following two reasons: (a) since people interpret social realities from their own perspective, it is usually very difficult to capture such diversified views using predesigned research instruments; and (b) having such complexity of investigating the Ethiopian PPP cases under its current highly politically influenced context, a single case study research method was selected to systematically learn and observe the multiple factual realities emerged from both the public and private setup.

Case study approach can be also used to identify key factors beyond systems boundaries (Montealegre, 1999), which is also a particular focus of this study. As justification, a case study strategy is chosen because of its advantages on: (i) creating novel insights from the locally interwoven rich social, cultural, financial, and political influences of partners on the overall implementation of PPP and ISP initiatives, and (ii) examining the overall transformation process of PIS delivery in the context of Ethiopia.

Usually, the purpose of most case study research is to answer the *why* and *how* research questions (Yin, 2003; Eisenhardt, 1989a) rather than *how much* and *how many* inquires (Andrade, 2009). This type of research questions can be used to understand better complex social phenomena. The *why* and *how* research questions are usually ended with theory development. Case study research is aimed at to produce description, new theory and theory testing (Eisenhardt, 1989a). Case study research generates rich data (Miles and Huberman, 1994) that is suitable to develop new theory that fits to its realities (Eisenhardt, 1989a). For instance, a substantive theory generated from a specific area of inquiry may applicable to that area (Andrade, 2009). Therefore, a case study method using a positivist qualitative paradigm is found relevant to address the multifaceted research question of this study. As illustrated in Table 3-1, the researcher considers the guidelines offered by Atkins and Sampson (2002) in this study.

Table 3-1: Guidelines for Undertaking Case Study (Source: Atkins and Sampson, 2002)

Element	Guidelines
Way of thinking	Provide an argument for why a case study is appropriate.
	State philosophical stance and perspective. Take account of bias when performing data analysis.
Way of controlling	Define and use some form of quality control measures and ensure that the results are credible.
Way of working	Construct a clearly formulated question that describes an important information systems issue or problem of interest.
	Determine how to draw conclusions and justify the results through the appropriate use of theory.
	Create a first cut conceptual framework.
	Devise first cut case study questions.
	Perform a pilot case study.
Way of supporting	Choose appropriate methods for collecting data. Ensure that these are described in enough detail. Employ a systematic way to analyze the data. Ensure that these are described in enough detail.
Way of communicating	Create a plan for the final report.

3.4 Theoretical Lens of the Research

Use of any theoretical perspective requires the selection of a methodology that matches the underlying ontology and epistemology (Volkoff et al., 2007). For instance, information systems research lies at the intersection of people, organizations, and technology (Silver et al., 1995). It is both an organizational and a technical discipline that is concerned with the analysis, construction, deployment, use, evaluation, evolution and management of information systems in organizational settings (Orlikowski and Barley, 2001). Information systems research must be both proactive and reactive with respect to technology (Hevner et al., 2004). Although it is not common to start theory building with an existing theory (Eisenhardt, 1989a); such a technique can enhance the researcher's sensitivity to easily understanding the meaning of data (Pan and Tan, 2011). The three requirements of using a conceptual framework or theory for knowledge development are: (a) identifying who will and will not be included in the study, (b) describing what relationships may be present based

on logic, theory and/or experience, and (c) providing the researcher with the opportunity to gather general constructs into intellectual *bins* (Miles and Huberman, 1994).

Accordingly, the theory selected for case study research should not be outdated, immature, and overused (Darke et al., 1998). For instance, if an existing theory is supported by empirical case data, it has strong grounding and acceptance by target audiences because a theory which has developed based on a case study research may possess at least three strengths (Eisenhardt, 1989a). First, as the theory may contradict the existing theory which requires further refinement and development to be a valid theory, it may become a novel one. Second, the emergent theory has constructs that are measurable and can be used to develop testable propositions. Third, the theory from case data is empirically tested and truly represents its reality. Therefore, this research intends to pave a way to develop a theory of partnership success framework based on existing theory and analytical lens which is grounded on empirical data. While developing the proposed theory of IS partnership success, this research considered soft systems approach as analytical lens to the analysis of a real world and conceptual situation of the case under study.

3.4.1 Soft Systems Methodology as Analytical Lens to Learn the Case

The soft systems approach to the analysis of a real world situation is certainly relevant in the field of information systems. A fundamental concept incorporated in Soft Systems Methodology (SSM) is the wholeness of a system, which concept has been borrowed from the field of biology, where biologists are concerned with studying an organism as a whole entity (Patel, 1995). SSM can be traced to the research works of Peter Checkland, which were proposed in the 1970s as a general problem solving approach for tackling soft problematic situations where human activities are involved (Checkland, 1999). SSM views the defined human activity systems under investigation as more than just the sum of its parts, and requires the analyst to take a holistic approach (Patel, 1995). For instance, partnerships considered by SSM as a participation that allows for alternative worldviews to be surfaced and for debate to take place between stakeholders that helps generate shared

understanding and accommodations between (sometimes) conflicting views (Checkland and Holwell, 1998).

As shown the SSM approach in Table 3-2, SSM is primarily used in the exploration of complex messy situations that involve divergent views where Peter Checkland argues that such systems are highly unstructured and cannot be studied with the well-established methods of science (Checkland, 1999). These systems are considered 'soft' systems, where the problematic situation is not well defined and is affected by different perceptions of the various stakeholders. Further, in messy situations, when the problematic situation may not be defined or even agreed upon, thus it is considered by SSM as a *soft* problematic situation rather than a *hard* well defined problem. Ever since, the successful usage of SSM has grown to be internationally recognized and applied in different contexts including in information systems with numerous practical examples in various sub areas and fields. This is supported by evidence of practical examples published in details by Checkland and Scholes (1990) and Wilson (2001).

Table 3-2: Soft Systems Methodology and its Approach (Source: Iivari et al., 1998)

Approach	**SSM**
Goal	To provide a learning methodology to support debate on desirable and feasible changes.
Guiding Principles	Use of notional system models called "human activity systems" to illuminate different *weltanschauung* which may be applied to any social system including an information system which is a system to support the truly relevant human activity system.
Fundamental Concepts	Weltanschauung; Human Activity Systems; Root definition; Relevant system.
Information Systems Development Process	Stream of cultural analysis; Stream of logic-based analysis.

As the real world is seen as a changing flux of events and ideas, SSM is thus essentially a process for managing that flux and then deciding upon a course of action (Checkland and Scholes, 1999). The comparison between the real world situation as it is and the relevant conceptual model of what it should do, is one of the main steps in exploiting the conceptual

model. The conceptual modelling stages in SSM aid in making the structure of the situation explicit and exploring the interdependencies between the system activities. Such comparison may lead to gaining better understanding of the real world situation and to developing some ideas for enhancements as for each model a monitoring and control sub-system should be included, in which efficiency, effectiveness, efficacy, ethicality and elegance may be assessed (Checkland and Scholes, 1999).

In general, the SSM, as presented in the original works of Checkland (1981; 1998) and Checkland and Scholes (1990), has seven stages. Some of them address the 'real' world; while others address a 'conceptual world'. The seven stages are: Entering the problem situation; Expressing the problem situation; Formulating root definitions of relevant systems; Building conceptual models of human activity; Comparing the models with the real world; Defining changes that are desirable and feasible; and Taking action to improve the real world situation (see also Figure 3-1).

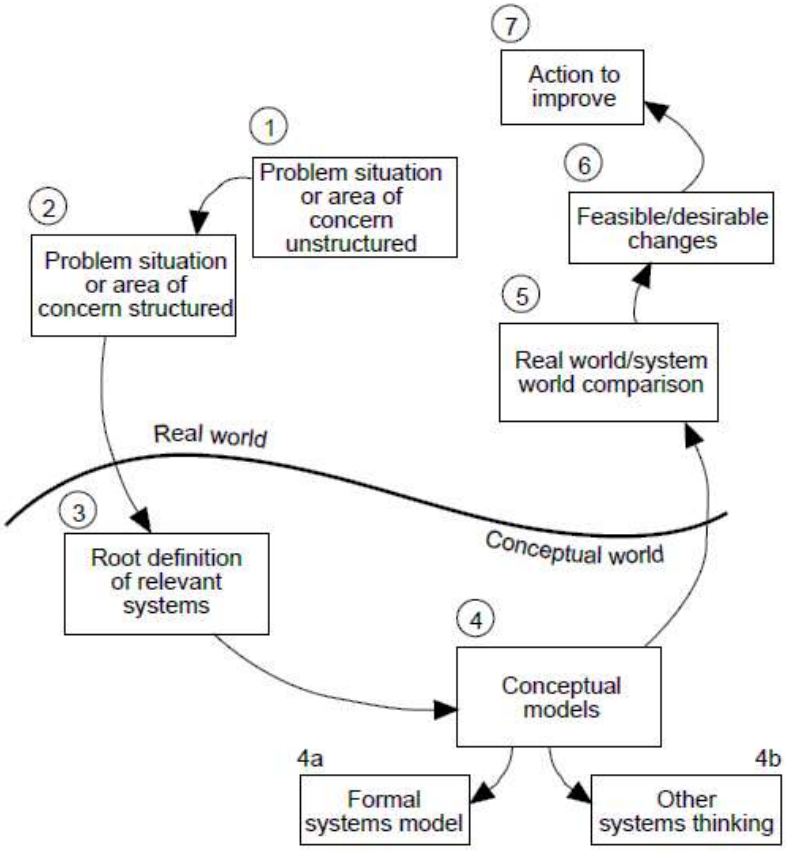

Figure 3-1: Soft Systems Methodology and its seven-stages (Source: Checkland and Scholes, 1990)

Consistency is one of the hallmarks of SSM, as it seeks to learn about problem situations in order to generate commitment to actions for improvement (Checkland, 1981). SSM also provides a formalized structure for dealing with messy, ill-structured problem situations, and recommends specific methods and techniques to be used at each stage such as rich pictures, root definitions, conceptual models, gap analysis, and an assessment of cultural feasibility, and systemic desirability (Checkland, 1981). The basic principles of SSM involve the use of the intellectual construct of a "Root Definition" (RD) to capture the purpose of the system by a textual definition and to construct a statement that accommodates different stakeholders' perceptions; and the use of a Conceptual Model (CM) to describe what the system must do, to be the system defined in the root definition (Wilson, 2001). In short, an RD describes a transition process where the purpose will be achieved when an input is transformed to an output (Wilson, 2001).

As no two analysts may develop the same set of activities from a given set of RD, SSM is not only a technique, but a structured way of representing thinking about a particular complex problematic situation involving human activity. For example, the soft systems approach can be applied to examine the partners' *weltanschauungs* while considering the different perspectives of stakeholders and the various environmental influences while forming a PPP. Thus, a soft systems approach, namely SSM, was selected to this study in order to understand and learn the impact of the PPP and to study the diverse range of perceptions of actors involved in the Ethiopian Lehulu partnership.

In general, it has been found by SSM practitioners that diagrams are more effective than linear prose in presenting relationships and that promote holistic thinking (Checkland, 1999). There are three phases in early models of SSM: (1) building a *rich picture* of the problem situation using the CATWOE techniques, (2) developing models of relevant human activity systems, and (3) using those models to stimulate thinking about organizational change (Woodburn, 1991). For instance, a rich picture can portray actors in a problematic situation and indicate relationships among them to describe fundamental characteristics of the system (Checkland and Scholes, 1990). Accordingly, each spelling in the mnemonic CATWOE portrays the rich picture components of the study context as follows:

- The '**C**' refers to the dwellers of Ethiopia who are the **Customers** and would be victims or beneficiaries of the new PIS systems.
- The '**A**' refers to both the public sector and private sector **Actors** in Ethiopia who would perform the activities to realize the new PIS system.
- The '**T**' refers to the ongoing PIS **Transformation** in Ethiopia where the poor PIS is transformed into electronic new PIS systems.
- The '**W**' refers to the **Weltanschauung** in which stakeholders' view of the new PIS systems making the environment meaningful in Ethiopia.
- The '**O**' refers to the **Owners** in which stakeholders including the public sector and citizens may contribute together to abolish the poor PIS systems in Ethiopia.
- The '**E**' refers to the **Environmental constraints** such as lack of national PPP regulatory laws which may positively contribute to a potential threat of information asymmetry while the IS partnership initiated to build the new PIS systems in the Ethiopian environment.

In sum, based on the preceding discussions, the researcher has built the rich picture of the problem situation for this study using the SSM's CATWOE techniques and presented in Table 3-3 by specifically indicating each mnemonic.

Table 3-3: CATWOE view of the Ethiopian PPP (Inspired by: Checkland & Scholes, 1990)

CATWOE and its definition for the PPP case under study		
C	Customer:	Who would be victims or beneficiaries of this system?
		* *Citizens/dwellers of Ethiopia*
A	Actor:	Who would perform the activities?
		* *Public and private sectors*
T	Transformation:	What input is transformed into what output?
		* *Poor PIS delivery into electronic PIS*
W	Weltanschauung:	What view of the world makes this system meaningful?
		* *Partnership*
O	Owner:	Who could abolish this system?
		* *The public sector*
E	Environmental Constraints:	What in its environment does this system take as given?
		* *Information asymmetry and lack of PPP regulation*

3.4.2 Agency Theory

A coherent research must adopt different philosophical perspectives in which the philosophical approaches must be well understood and applied by the researcher (Walsham, 1995a). Concerning the field of information systems research, methodological approaches may be inspired by differing philosophical understandings of reality and heavily oriented towards the application of information systems to business (Dobson, 2001). In this regard, this research obliges to examine the PIS transformation process under a PPP model in Ethiopia. Thus, the researcher uses Agency Theory as a theoretical lens to examine the ongoing Ethiopian PPP initiative and far ahead to develop a theoretical model for IS partnership success with an outlook to understand its implication for the general information systems development.

The researcher has also studied deeply both sectors especially the Ethiopian public systems and attempted to understand how the IS partnership mechanisms are initiated and evolve over time within the private sector without a national PPP regulatory framework. In this regard, while analyzing the contributing critical factors and emergent insights from the ongoing Ethiopian PPP initiative, Agency Theory also provides a useful lens to examine the overall framing of business alignments; negotiations, re-negotiations, and information asymmetry among the Ethiopian partners (see Figure 3-2). Accordingly, the researcher able to learn gradually how the partners deal with complex or unstructured problematic situations while there is no PPP regulatory framework in the Ethiopian context. Similarly, the researcher had made an effort to investigate comparatively before and after the ongoing PPP is initiated, especially while organizational PIS transformation and institutional changes desperately needed in the country.

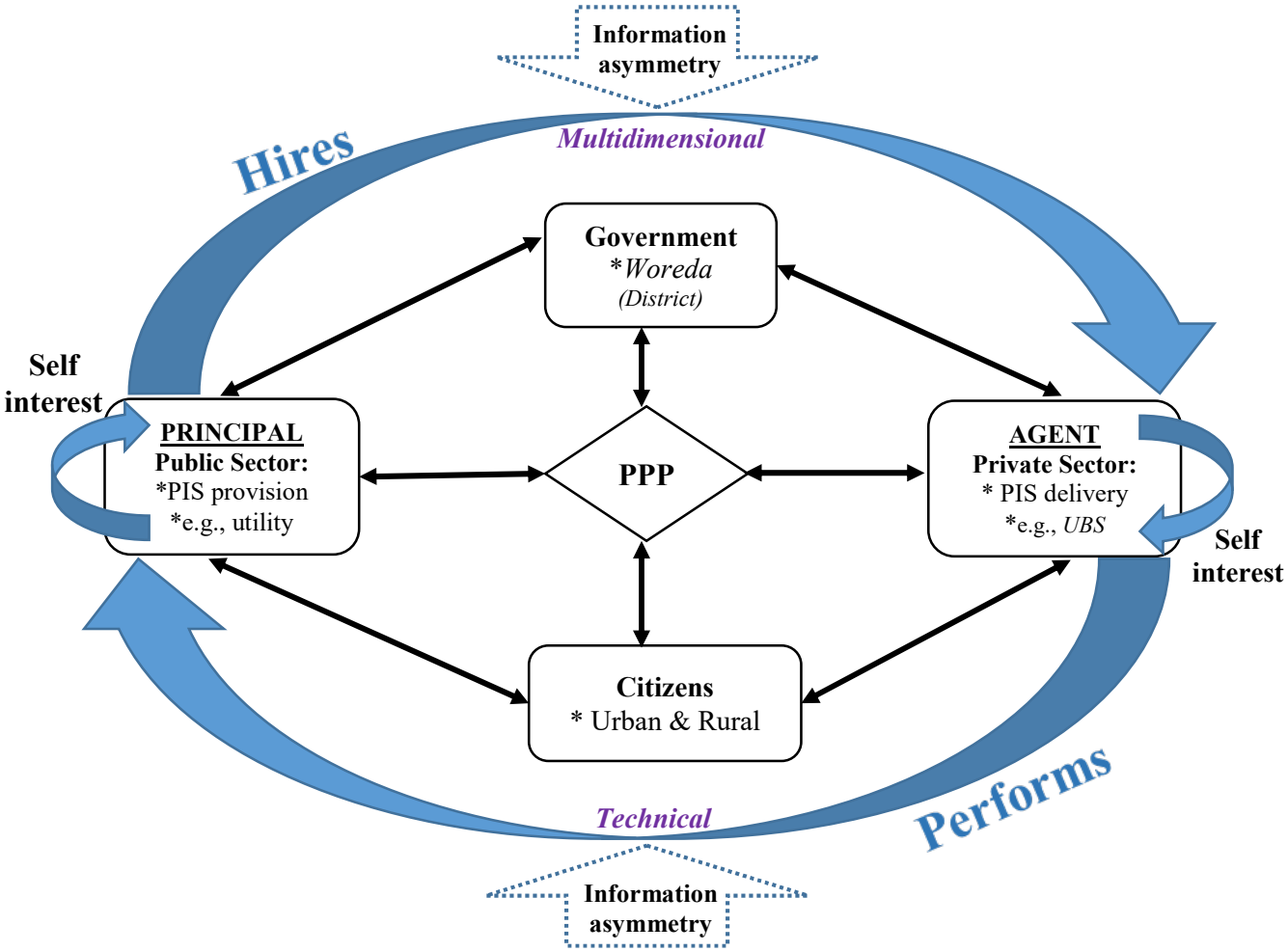

Figure 3-2: Conceptual Framework of the Study (Inspired by: Eisenhardt, 1989b)

As depicted in Figure 3-2, legal constraints are often problematic since a complete contract (hiring and performing) is an unrealistic goal and most contracts only cover the most important perceived problems (Walden, 2005). For example, if the principal unable to know whether the agent has acted in accordance to the principal‘s interest (Shapiro, 2005), it is therefore to be expected that the self-interested agent will shirk on the contract and carry out actions that are not in the interest of the principal (Hendrikse, 2003; Eisenhardt, 1989b). As a result, opportunism (as explained in Chapter Two), either directly or indirectly, can be observed. Pass et al. (2000) argue that the public sector, also known as the government

sector (as opposed to the private sector which has self-interest), is the part of the economy that is concerned with transactions of the government (or the citizens). Hence, within the context of this study, Agency Theory is used as a lens to learn about how partners under the Ethiopian PPP initiative might balance their public interest and self-interest. The study also employs this lens to examine the main role of partners and stakeholders in the country's overall PIS transformation especially under the Lehulu PPP initiative.

3.5 Research Design

Research designs are logical blueprints which serve as *logical* plans, not the *logistics* plans often referenced by others (Yin, 2011). There are different qualitative approaches or methods (such as ethnography, action research, grounded theory and case study etc.) that examine phenomena in a natural setting and use similar data collection methods (Dubé and Paré, 2001). Accordingly, this case study follows the positivist qualitative research guideline procedure (See Figure 3-3) which is proposed by Eisenhardt (1989a).

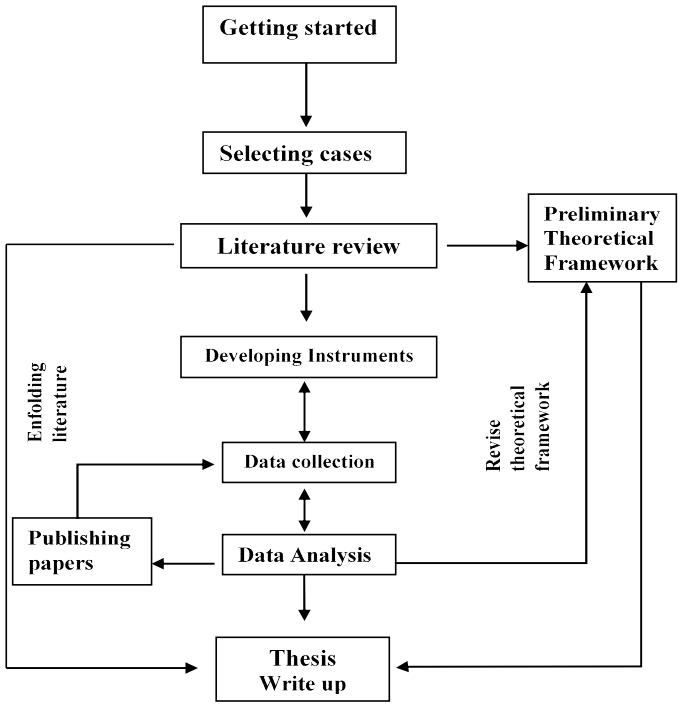

Figure 3-3: Research Guideline for this Study (Source: Adopted from Eisenhardt, 1989a)

A flexible research procedure often allows developing a general understanding about the research area, to formulate the research question, and to identify a research case etc. It is also recommended to have a research question before entering the field, though it can be modified or totally abandoned as data collection and analysis proceeds (Eisenhardt, 1989a). Thus, the main purpose of the guidelines for the research procedure (shown in Figure 3-3) is to have a logical blueprint which serves as a plan to the overall research process. In sum, this study is designed in a way to iron out the research objectives and present the dissertation's journey undertaken in answering the research question presented in Chapter One.

3.5.1 Case Study Layout of the Research

Case study research, depending on the context, may adopt single-case or multiple-case designs for literal or theoretical replication or theory building. This research focuses on the former. Since the study has a single case design, the research concentrates on conducting an exploratory research under a positivist qualitative paradigm. The overall researcher's collection and analysis of case data progressively supported by using multiple sources of evidence (triangulation of data) to provide multiple instances from different sources (Miles and Huberman, 1984). Multiple sources of evidence may also assist in corroborating information provided by different participants where there are conflicting accounts of events, episodes or actions exhibited in the study. An episode (with multiple occurrences) for the purpose of this study is defined as a sequence of actions which may trigger in the process of the partnership implementation or in response to an intentional or unintentional chain of changes caused by the actions of the partnering organizations. Each episode may be described by a given observable cause and effect results. In this study, several events are investigated in different occasions (pre-PPP era, the underway PPP era, and post-PPP era). Identification of the episodes is also done at various time intervals such as before, while, and after the data collection activity. As illustrated in Figure 3-4, the events are embedded in their respective eras of transformation under the given context.

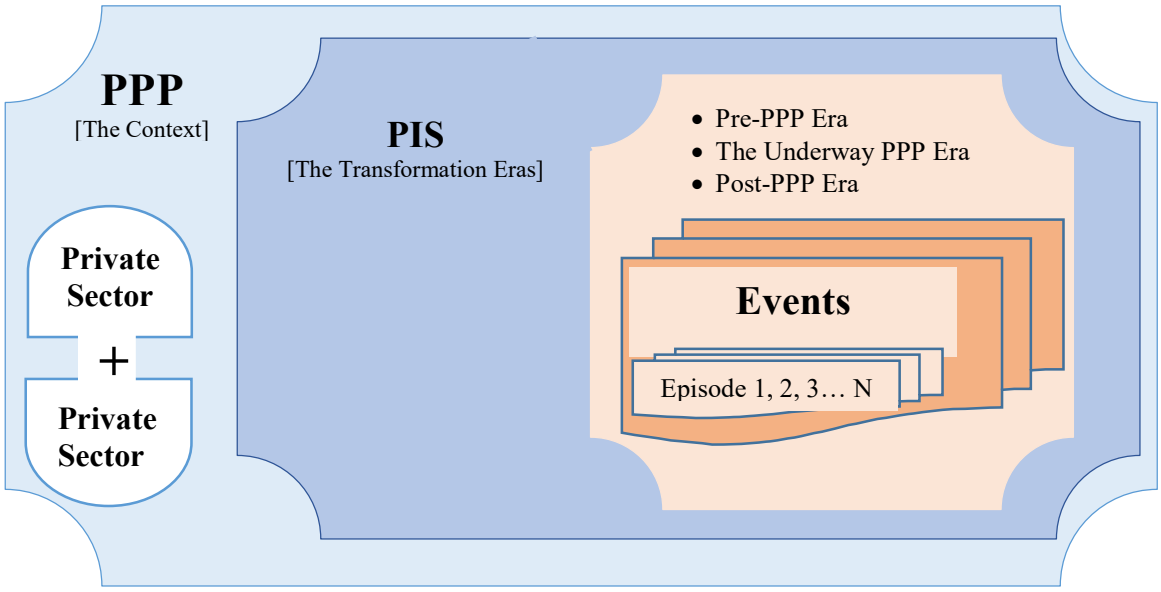

Figure 3-4: The Case Study Layout of the Research

3.5.2 Research Case

A case is an activity, event or a problem that can be identified as spatially delimited phenomenon observed at a single point in time or over some period of time (Gerring, 2007). Since some cases may have unique features, consulting previous literature may help to define a specific case so that research findings can be easily compared with existing literatures or present a justification for definition of a new case (Yin, 2003). For instance, if a research case is a representative of other organizations, then its findings can be replicable to other similar organizations (Benbasat et al., 1987). As a result, it may also increase the external validity of the research findings. Accordingly, during this case study research process, multiple insights gained from the public, beneficiaries, and private sector perspectives. The results, which are embedded within the Ethiopian partnership development process, are also supported by methods of triangulation to reach on the overall findings.

Since the main focus of the ongoing Ethiopian initiative, which specifically commenced for improving the delivery of basic PIS under the model of public-private cooperation in the

country, this case study incorporates a total of seven partners (six Ethiopian government firms and a single private firm) which constitutes one PPP model. As case study (similar to that of this study) can give the opportunity to investigate all phenomena in depth, the partnering firms in the Ethiopian PPP and their partnership (i.e., Lehulu PPP) is selected as a single case of study in this research because Lehulu is considered as the result of participating change agents in the first breakthrough partnership initiative of the Ethiopian PIS transformation and development. Therefore, the primary unit of analysis is the case.

In the same vein, one might expect different results for predictable reasons, therefore, a theoretical sampling considered for this research by selecting the ongoing Ethiopian PPP context to extract the critical factors of a PPP that could determine the degree of information asymmetry and produce a theory of partnership success model. The goal of theoretical sampling is not the same as with the probabilistic sampling because the researcher's goal is not to capture the representatives of all possible variations, but to gain a deeper understanding of analyzed cases and facilitate the development of analytic frame and concepts used in the research (Glaser and Strauss, 1967).

3.5.3 Data Sources

In order to address the main research question of this study, a qualitative approach is employed to gather data from oral discourses and supportive written materials. This approach, in general, can give greater scope to address the research issues by incorporating particular *why* and *how* questions. Hence, personal in-depth interviews, document content analysis, and unobtrusive observations are the principal data collection methods employed in the current work. The interview method is the dominant approach that extensively employed in this work. A dominant method is a method or methodology used as the main approach with contribution(s) from the other(s) (Mingers, 2001).

This study has secured primary data using interviews and observations from the public, private, and beneficiary citizens of the country. Mainly the interviews are concern about the ongoing PPP initiative, and the delivery of basic PIS of the country under three categorical eras: (a) pre-PPP era, (b) the underway PPP era, and (c) post-PPP era. The Ethiopian Lehulu

PPP incorporates a total of seven stakeholders (six public and one private company) namely: Ethio-Telecom, WSA (Water & Sewerage Authority), Ethiopian Electric Utility (EEU), Ethiopian Broadcasting Corporation (EBC), Road and Traffic Authority (RTA), Ministry of Communication & IT (MCIT), and Kifya Financial Technologies plc (KFT). The *Lehulu* Unified Billing System (UBS) has started its operation in 2013 by opening more than 33 operating branches in the capital city and progressively in the capital of Regional governments such as Mekele City, Bahirdar City, Hawassa City, and Adama City.

Pertinent data were collected during field research visits. The data were secured by conducting detailed interviews with the beneficiaries, private and government actors who are actively participating in the ongoing PPP. Some of them are also working at different levels of decision making, project management, service operation, and end-users' complaint management as well as citizens who are the main beneficiaries of the PIS. In addition to the interviews, unobtrusive observations also served as main sources to learn the experiences and perceptions of respondents toward the partnership. Stakeholders related to the PPP processes in focus were identified based on their roles in the process. Accordingly, beneficiaries, private and public sector staff were the key stakeholders to be considered. Selection of the informants was done up on the recommendation from the partners under consideration. Besides, all the in-depth interviews were supplemented by both published and unpublished vital document reviews.

3.5.4 Data Collection Techniques

First, a pilot study was implemented to refine the components of the interview and to ensure the interview instrument met the needs of this study and add the appropriate value. During this very important step three participants voluntarily participated. The researcher has observed no significant revisions on the contents of the interview before proceeding to the actual interview except clarifying some abbreviations of the technical terms of the research such as PPP, ISP, and PIS etc.

Accordingly, the researcher has leveraged two suggestions from Myers (2009). First, top level officials were contacted (after long bureaucratic processes and appointments) while conducting the actual data collection. Second, the researcher has shared some of the preliminary findings of this research with these top level officials, by means of his early publications (see Appendix V for the list of publications). This early communication effort supported the researcher to continue building very good relationship with key staff members and actors of both the private and public sectors.

A number of unstructured interviews (the first step of the interview process) were conducted with actors of the public and private sectors who participated mainly in the implementation of the Lehulu PPP. Such the very first interviews were used as a prototype to compare with that of the early pilot study. Interviewees were selected by first making contact with one key person who referred the researcher to reach the other next interviewees, i.e., the researcher employed partly the snowballing techniques after using a purposive sampling technique. Snowball Sampling is a sampling procedure where an informant helps a researcher identify other knowledge informants. Judgmental sampling, also known as a purposive technique, is employed according to the researchers' judgment and aim of the study in order to select units that are representative of the population (Singleton and Straits, 2005). The technique is applied mostly when a researcher has clear characteristics of the participants needed. Under such techniques, the researcher only goes to the populations that are most likely and prepared to supply the required information (Kumar, 2005).

To collect the data, a total of 31 (3 females and 28 males) experts, managers, and consultants from the public and private sectors as well as citizen beneficiaries were interviewed. The interviewees were asked to narrate the historical process (pre-PPP events, the underway PPP, post-PPP expectations) of the country's PIS transformation and the PPP implementation that they have observed or participated in. When required, the interviewer interfered for more discussion and narration of interesting stories. Interviews were audio recorded (with participant permission) and later transcribed except for shy respondents

where the researcher couldn't get permissions for recording. In those cases, interview notes were taken manually on paper.

All interviews are conducted using a semi-structured basis. Semi-structured interviews lasted between 15 and 70 minutes were conducted both in a tape and shorthand note from January 2014 through July 2016. The interviews are also designed in a way that cluster the end-users, the private sector service operators, and the private and the public sector officials. The semi-structured type of in-depth interview gradually supplemented by reviewing the project documentation and consulting related unpublished documents such as the official Lehulu's website, annual reports, manuals, and newsletters. By considering the aforementioned sources, as demonstrated in Figure 3-5, the researcher is able to triangulate the preliminary findings.

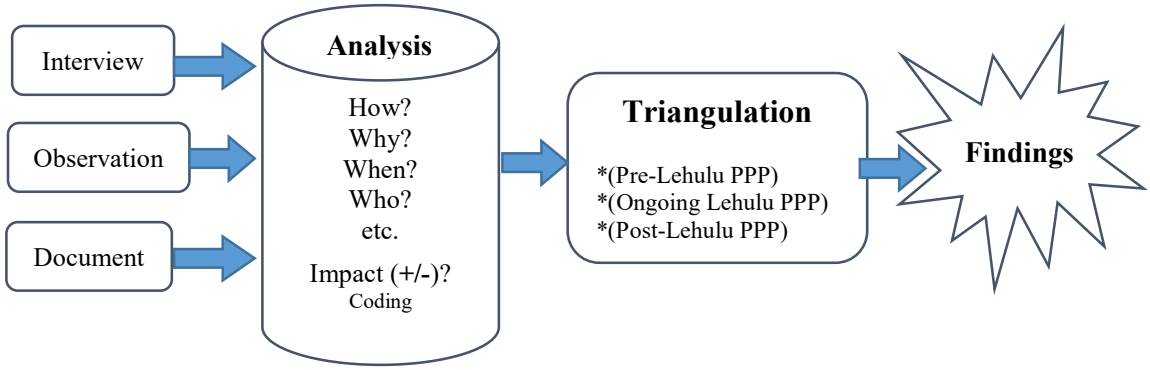

Figure 3-5: Demonstration of the Data Collection in this Case Study

To assure the interviews are in line with the nature and orientation of positivist qualitative studies, this study employs the methodological principles offered by (Eisenhardt, 1989a). Almost all interviews were initially conducted using a local language and then translated and transcribed into English. The interviewees were given the opportunity to review the transcribed document in their local language and collected feedback as required. Follow up and multiple interviews were also conducted based on the respondents' opinion on the ongoing IS partnership implementation and the overall PPP process. In the next step, the extensive data analysis and interpretation processes are followed.

3.5.5 Data Analysis and Interpretation

Usually, researchers may expect to make every effort to produce analysis of the highest quality while dealing with a unit of analysis (Yin, 1994). As actors of both the public agencies and private sector as well as beneficiary citizens were selected to provide information for this research, hence the primary unit of analysis is the case. Accordingly, the data analysis and interpretation process was employed in such consideration.

In order to accomplish and to produce an analysis of the highest quality, there are four principles that should attract the researcher's attention: (i) show that the analysis relied on all the relevant evidence; (ii) include all major rival interpretations in the analysis; (iii) address the most significant aspect of the case study; and (iv) use the researcher's prior, expert knowledge to further the analysis (Yin, 1994). In light of the above notion, parts of a qualitative data can also be analyzed using the prominent data analysis principle recommended by Miles and Huberman (1994). This principle defines qualitative data analysis for case study as consisting of the following three concurrent flows of activities:

(i) **Data reduction** refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in write-up field notes or transcriptions. It occurs continuously throughout the life cycle process of any qualitatively oriented study. Data reduction is not something separate from analysis as it is integrated part of the analysis;

(ii) **Data display** which refers to an organized and compressed assembly of information that permits conclusion drawing and action. Similar to that of data reduction, the creation and use of displays is not separate from analysis as it is also the part of the analysis;

(iii) **Conclusion Drawing and Verification** is the third stream of analysis activity. Since the very beginning of the data collection task, the qualitative analyst is beginning to decide what the analysis tasks really mean (noting regularities, patterns, explanations, possible configurations, causal flows, and propositions). Thus, the final conclusions may not appear until data collection is over because conclusions are also verified as the overall analysis proceeds (Miles and Huberman, 1994).

Under a qualitative tradition that focuses on extracting the content, a discourse is required in order to mine structures and meanings from inputs which containing meaningful knowledge including written documents, speeches, interviews, and media reports. Accordingly, one of the qualitative data analysis tools known as Atlas/ti™ software is employed to analyze the qualitative data of this research.

Atlas/ti™ software was used for coding purposes of the interview transcripts so that the data can be presented in a summarized way. The codes and concepts that were created had a provisional and tentative character, but as the analysis progressed they became settled (Myers, 2009). Since case is the unit of analysis, parts of the qualitative data of this study were analyzed using the prominent data analysis principle and the coding procedure scheme recommended by Eisenhardt (1989a) adopted for this work. Accordingly, as per the recommended format, the researcher followed the four-steps (see Figure 3-6) analytical strategy process to analyze the interview transcripts and the data at hand in parallel as he collected it and reaching at saturation level.

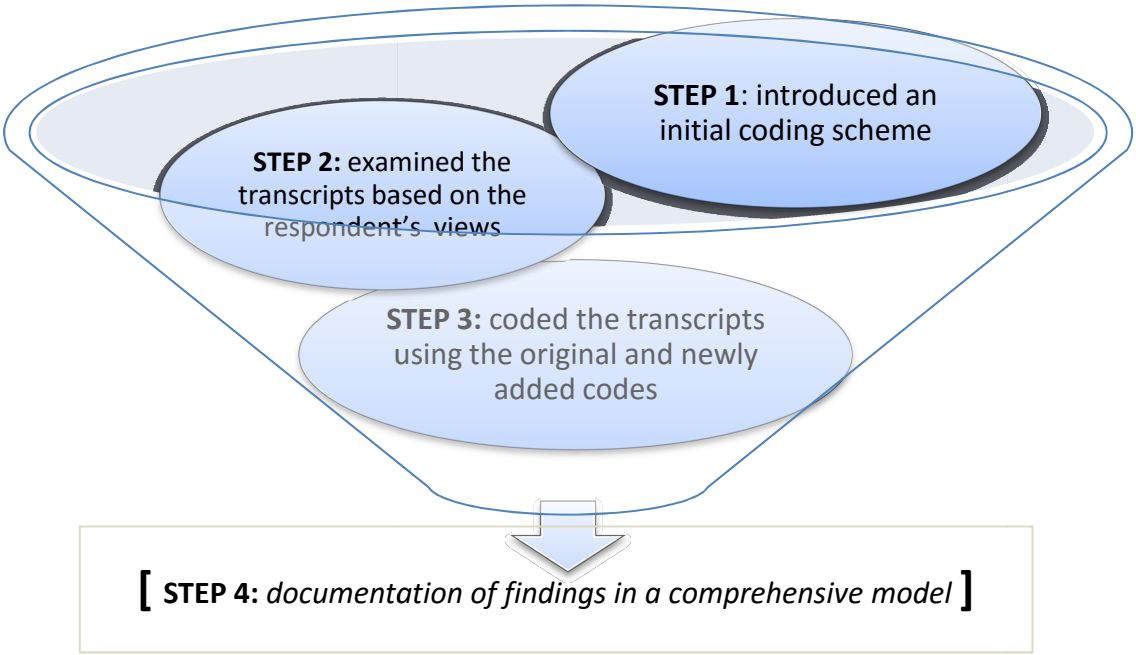

Figure 3-6: Demonstration of the Data Analysis and Interpretation in this Case Study

In **step 1**, the researcher introduced and developed an initial coding scheme whenever necessary based on the PPP, PIS, ISP, e-Service, information asymmetry, e-Government, m-Government, opportunism, and Agency Theory literature. Based on the aim of the study, to minimize the extent of the collected data and formulate properly the scope of the data structure by assigning meaningful codes from the interview transcripts, the researcher followed the standard methodological guideline of open, axial, and selective coding for qualitative data (Strauss and Corbin, 1998).

First, under the Atlas/ti workbench generator all interviews are successfully coded into a total of 71 initial codes which are linked to different quotations of the transcript using the open coding procedure (see Table 3-4 the example of assigned codes to their specific quotations).

Table 3-4: Example of assigned Codes to their specific Quotations in this Case Study

Open Codes	Quotations of the Transcript
Drawbacks of the previous PIS system	*"Back in days, I remember my mom used to walk down long distances to one of the utility bill collection windows physically to pay our home's either electric or water bills in different days and scattered locations."*
Benefits of the new PIS system	*"Now we save our time and cut long distances and above all no long queues at the Lehulu centers."*
Negotiation	*"Although a number of stakeholders incorporated in the Lehulu PPP initiative, the final agreement of this model namely 'Lehulu PPP' is ended up successful after a fruitful negotiations made."*

In **step 2**, the researcher examined the transcripts again based on the respondent's perspective and refined more by going to the next step of axial coding and later systematically categorized based on the respective three eras (i.e., Pre-PPP era, The undergoing-PPP era, and Post-PPP era).

In **step 3**, the researcher added further insights about the case after necessary added transcripts coded using the original codes by going to the next step of selective coding and finally linking codes to integrate the selectively added categories or subcategories. (see Appendix IV the example of interview coding with Atlas/ti).

Finally, in **step 4**, as the data collection and analysis underway (step 2 and 3), the researcher interpreted the interviews and documented those findings in a comprehensive model. In general, in collaboration with the Atlas/ti™ software, manual analysis is also used predominantly.

To extract major concepts or themes which are relevant to the aim of the research, hence the researcher employed the aforementioned common form of qualitative data analysis approach and consequently after properly applying them the researcher again revisited and scrutinizes the collected data and identifies information that are relevant to the research question and objectives; develops a coding system based on samples of collected data; classifies major issues or topics covered; develops a summary report identifying major themes and the associations between them; uses direct quotations to present the findings; and then classifies each piece of data accordingly with the objective of getting a general sense of patterns of the data which are relevant to this study.

In sum, based on the results and findings from the analysis, the researcher tracked different causal events across each phenomenon that account for brining changes in the Ethiopian PIS transformation and ICT infrastructure development. Table 3-5 shows the template prepared to summarize the data analysis of the research findings. This template used for presenting the summary of different episodes, phenomena, and events.

Table 3-5: Template for Summarize and Document the Findings

Investigatory Queries	PIS Transformation		
	Pre-PPP	During PPP	Post-PPP
What happened; what was there?			
How do such events influence the public sector agencies?			
What were the private ICT sector's roles during this phase?			
What were the public sector agencies' roles during this phase?			
How do such events influence the private ICT sector?			
How do such events influence the public sector agencies?			
How do such events influence the PIS of the country?			
Researcher's observation:			

3.5.6 Validity, Reliability, Generalizability and Ethics

(a)Validity

Positivist and interpretivist researchers do not have a common view of validity and reliability of research outcomes. The canons or standards of validity, reliability, and generalizability had acquired the status of *a scientific holy trinity* among the positivist research community (Kvale, 1996). However, these canons have been redefined in order to fit the realities of the qualitative research and the complexities of the social phenomena that we seek to understand (Strauss and Corbin, 1998). Thus, validity refers to how well the research method investigates what it intends to (Ritchie et al., 2003; Mason, 2002) and the

extent to which the researcher gained full access to informants knowledge and meanings (Remenyi et al., 1998).

In case study, validity may be achieved by using triangulated data sources and mode of data analysis methods. In this case study the research design was transparent and the researcher has documented details. Thus, validity of interpretation was enhanced by taking considerable care in understanding the issues that were of concern to informants; by triangulating the evidence supplied by them; and by reflecting on the issues raised. Further, interpretations and arguments were supported by direct quotations from informants or reference to other evidence sources.

Construct validity is achieved in a case study by using triangulated data sources, having key informants review the draft study report and using chain of evidence (Yin, 2003). Further, presenting the new theory graphically and letting the key informants to reflect on it considered as means of theory validation (Pan and Tan, 2011). Accordingly, after the first draft report produced, the researcher has discussed with three key informants to check the validity of the research findings. Preliminary research findings were also sent to different peer reviewed publication outlets so as to increase the validity of the research findings.

Concerning the internal and external validity of this study, as it is useful to consider the qualitative study's internal and external validity (Ritchie et al., 2003), the internal validation was addressed through iteratively reflecting on the body of evidence in light of concepts previously coded. Regarding the efforts in ensuring external validity of this study, it involved data source triangulation through including different evidence sources, multiple interviews, and observations. Hence, all interview transcripts were considered in light of other evidence such as documentations and reported materials about the PPP initiative.

(b) Reliability

Reliability is concerned with the question of whether the results of a study are repeatable. The discussion about reliability in qualitative research can be viewed in two respects (Flick, 2009). First, the genesis of the data needs to be explicated in a way that makes it possible to differentiate between a statement of the subject, and the point at which the researcher's interpretation begins. Second, procedures in the field or interview and with the text need to be made explicit in training and rechecking in order to improve the comparability of the behavior of different interviewers or observers.

Reliability is also concerned with demonstrating that the researcher did not invent or misrepresent data or was careless in data recording or analysis (Mason, 2002). The reliability of the case study method must be maintained so that other researchers who follow will arrive at the same insights if they conduct the study along the same steps again (Denzin and Lincoln, 1994). Reliability is largely concerned with whether a study can be repeated (Kvale, 1996; Lee and Baskerville, 2003; Mason, 2002). However, qualitative researchers recognize the difficulty in reproducing social phenomena because of the challenges involved in replicating the precise conditions under which evidence was originally collected (Strauss and Corbin, 1998). Hence, the issue of reliability needs to be conceptualized differently when considering qualitative studies.

Individuals with different learning experiences may have different theories to interpret their environment (Denzau and North, 1994), this study, on the other hand, does not take any particular individual interpretation rather the study has mapped out all views from different participants of the research including the PIS beneficiaries, the public and private sector actors. Furthermore, a qualitative researcher can enhance reliability by reflecting on and outlining in a transparent way the procedures that led to the research findings; by checking through his/her interpretations; by carrying out the fieldwork consistently and ensuring all informants have sufficient opportunity to discuss their experiences; by systematically analyzing the evidence; and by supporting interpretations with evidence and offering a balanced perspective (Ritchie et al., 2003). These requirements were addressed in this study

in order to withdraw the curiosity of transparency. As a result, all informants were given sufficient opportunity to discuss their experiences and later the interpretations thoroughly checked by systematically analyzing the supporting evidence in order to offer a balanced perspective and ensure consistency. Therefore, it is possible to repeat the findings of the study if other researchers follow the same procedure.

(c) Generalizability

Qualitative researchers emphasize the importance of reflection on the body of evidence, the ability to make critical assessments of informants' statements, and the importance of producing convincing arguments and explanations (Mason, 2002). In qualitative research, statistical generalizability to a wider population is not the objective, rather insuring appropriate representation of the study's events. For example, the only way to generalize to a new setting in qualitative research is for a theory to survive an empirical test in that setting (Lee and Baskerville, 2003). Thus, a researcher can generalize to concepts, theory, specific implications or to rich insights (Walsham, 2006).

Transferability refers to generalizability of the research result across different social settings (Robson, 2002). The term 'inferential generalization' can be also used to reflect the concept of transferability to other settings (Ritchie et al., 2003). However, a detailed understanding of the issues in a particular case expects to form the basis for better understanding of those issues in other similar settings (Remenyi et al., 1998). Thus, transferability to other settings depends on the congruence between the *sending context*, i.e., the context in which the research was conducted, and the *receiving contexts* i.e., the contexts to which the research findings are to be applied (Ritchie et al., 2003). As this study is a single case study, it may be difficult to make generalizations for other cases, however it may have contributions to develop a theory that will be tested with other similar cases and develop a formal theory.

The purpose of any case study is to make analytical generalization that fits to broader theory (Yin, 2003). This is achieved by comparing research findings with existent literatures. Thus, this case study used existing theory (Agency theory) as a guide for the research to collect

and analyze data. This gives a clear direction on the contribution of the research to existing theory. The researchers, therefore, need to provide detailed descriptions of context and phenomena so as to enable others to assess the findings' transferability. Regarding this study, based on the detailed descriptions provided, it can be inferred that the findings may be transferable to other similar third-world PPP and ISP cases.

(d) Ethics

Nowadays, ethical issues are often neglected in literature (Walsham, 2006), as a result, academic ethics are becoming questionable. Thus, in order to keep the academic ethics of this study, the researcher has followed and used the case study guideline procedure suggested by Eisenhardt (1989a) and developed a data collection instrument for this research. The use of both a digital voice recorder and a notebook also increased the academic ethics of the research because it reduces misinterpretation of respondents' views due to lose of memories. Visual diagrams with descriptions of the research procedures are also provided to let readers easily understand how the conclusions are drawn. This may give readers to make their own judgment about the research findings (Yin, 2003).

In general, the researcher followed the three ethical guidelines provided by Kvale (1996) while conducting this research. The three ethical guidelines are (Kvale, 1996):

- **Informed consent:** refers to outlining to potential informants the research purpose, participation's risks and benefits, the use and possible publication of results, and obtaining their agreement to participate.
- **Confidentiality:** refers to avoiding attribution of comments to research participants in written reports and in the oral examination. This is associated with anonymity which requires that the participants' identity is not known outside of the researcher/s.
- **Consequences:** refer to possible risks and benefits of participation.

In sum, the above guidelines were attentively followed to ensure the academic ethics and research integrity by: first the researcher received consent from the respondents; next the

researcher informed the participants about the level of confidentiality of their responses; and finally the researcher openly informed the participants about the benefits and consequences of their participation. Access to field sites was also negotiated with both the public and private sector actors and later participation consent was obtained from informants. Each informant's anonymity was respected.

3.6 Summary

Chapter three has included information on the design and methodology of conducting the case study under the positivist qualitative paradigm. Interviews and observations were used to collect the qualitative data for the study from the public sector agencies, beneficiaries of the new PIS, and the private sector. A justification for employing Agency Theory (the theoretical lens) in the study is also included in this chapter. The chapter has also highlighted the overall process of data analysis and interpretation procedures. The pictorial research guideline is also depicted. Finally, the chapter ends with discussing the validity, reliability, generalizability, and ethical issues of the research.

CHAPTER FIVE

DISCUSSION AND RESEARCH PROPOSITION

This chapter will discuss in-depth the findings in the light of the background literature and the theoretical lens. In particular, the central research objective has been addressed by producing a conceptual framework. Based on the findings, a set of research propositions is presented. The components of the proposed model are also operationalized and all propositions are clarified. The researcher has also attempted to conceptualize the Critical Success Factors (i.e., MCSFs and TCSFs) of a PPP. Consequently, an effort has been made to design and generate the *Theory of IS Partnership Success* (TISPS). Finally, TISPS is introduced. The proposed conceptual model is deemed worth produced to guide the multidimensional PPP deliberations in a developing economies context. The next section presents a sectorial comparative observation made on major events extracted from the study.

5.1 Observations on Major Events extracted from the Case Study

Undeniably, the ongoing Lehulu PPP has embraces of various events and episodes. This dissertation considers the following major milestones which have practically influenced the PPP initiative's journey toward the transformation of the Ethiopian information systems and ICT infrastructure development. Accordingly, this study has given due emphasis to elaborate each episodes (EP) as follows.

EP 1: The government has recognized its public sector's poor information systems.
EP 2: PPP has been introduced.
EP 3: Extension of the Lehulu PPP being effective after intensive re-negotiations.

The description of each of the preceding episodes is presented next.

EP 1: Recognition of the public sector's poor information systems

For generations, Ethiopians were eagerly waiting to see the restructuring and rehabilitation process of their public service agencies toward better digital PIS infrastructure development. However, due to the previous administrations' own tight local policies which are negatively skewed toward depreciation of having vital transformation strategies such as PPPs, Ethiopians just wakeup very late to seriously consider drafting vital transformation plans in order to transform their poor ICT infrastructure and manual PIS. Studies confirmed that most of the basic PIS of the country are manually based, haphazard, and poorly structured as most of its public sector is still ill and found in the infant stage to work in partnership with the private sector (Weseni et al., 2015; Kwon et al., 2014; Temesgen et al., 2014).

To start with, recognizing officially the poor PIS and ICT infrastructure of the country was not that easy for previous Ethiopian governments. It is recently that the country's information systems transformation flourish. Participants of this research agree that it is because of the country's GTP-I (drafted before 2011) and GTP-II (drafted before 2016), finally the public service providers in Ethiopia possessed a roadmap that guide them into better PIS transformation. Furthermore, the national study conducted by PwC (in 2011) believed to contributed a lot for recognizing the major public sector's gaps in the country. Respondents have also echoed in this study that the old PIS systems of the country were full of problems which most of its services poorly satisfied the public at large. However, ever since the public sector actors accepted the partnership initiative plan and started working with the private sector, a lot of improvements are starting sprouted. One good example is that the previously disregarded change agents (the private sector) motivated to work with the government.

Likewise, the private sector has also in its part recognized the poor PIS system of the country and started investing its finances and knowledge to transform the public sector's poor information systems by re-designing in depth the ill system into a new digital system. In conclusion, ever since the PPP initiative has commenced, it is believed and observed by many that the private sector has started delivering better and centralized electronic PIS to the population of the country.

EP 2: PPP has been introduced for Ethiopian information systems development

As it was highlighted in the preceding part and in the literature review part of this report, it is recently that Ethiopia has witnessed the inception of modern public sector reforms and transformation plans ever since both of its national GTPs (GTP-I & GTP-II) were introduced. Although it seems ambitious, those GTPs are highly expected to transform and gear toward the country's public sector development policies and strategies. As stated in the GTP-II, achieving a broad based and sustained economic growth so as to eradicate poverty has been and is a key objective of the government of Ethiopia (MoFED, 2011). Consequently, the government has designed, and is implementing policies, strategies and programs to guide and manage the overall development of the country accordingly. Though there is an attempt to record a significant change in the Ethiopian economy, the implementation of the public sector reform was challenged by various factors. One of the known factors is that in Ethiopia different development programs were implemented without analysis of staff and organizational needs, as a result, the implementation is not on the right track to fill the skill gaps evident in the civil service (Semere et al., 2014).

Concerning Lehulu PPP, the initiative process commenced when the key public sector actors accepted the IS partnership initiative plan which was designed by the fiduciary Ministry (MCIT) which was assigned by the Ethiopian government to initiate a PPP. Later, an official bid was announced and a potential private sector nominated by the fiduciary to serve the public for three and half years of operation before transferring back to the principals. Both the government of Ethiopia and the private ICT sector has reached a partnership agreement.

According to the agreement the private sector has studied in depth the public sector's poor information systems (AS-IS) and designed a new system (TO-BE) using a BOOT framework under a full follow-up of the fiduciary Ministry. The Lehulu PPP has inaugurated officially in the capital city and the private sector has started delivering the intended PIS to the capital of the country for the last three and half years. Ever since the new PIS taking place, end-users have started getting a one-window-shop service at any

nearest branches of the Lehulu centers. Thus, Lehulu can be seen as one exemplar milestone being achieved in the history of the country's public service transformations and a unified database based delivery systems. Respondents have also echoed in this study that such accomplishment may help to address the longtime demand of citizens by transforming the old legacy public systems into the newly designed better electronic information systems.

A flaw worth mentioning here is that during this period both sectors were expected to exchange information and share the knowledge of operating the new system. However, both the public and private sectors were not ready either to take over the new system or to transfer the running PIS respectively. As a remedy, consultants proposed to have new negotiations among all parties on how to either transfer back the ongoing services to another potential private sector or to let the current agent company get additional extensions to continue delivering the ongoing PIS. Since the latter option needs another in-depth ROI study, consultation, and negotiations, partners again reached into a new proposition to re-negotiate with the current agent itself for another improved version of PPP contractual agreement.

EP 3: Extension of the Lehulu PPP being effective after intensive re-negotiations

Many participants of this study underlined that soon after the PPP initiative commenced, gradually unseen factors of the IS partnership pact started expose themselves within the allotted three and half years and negatively influence the delivery of the PIS. Lately, the IS partnership's major gaps and potential information asymmetries have started to reveal themselves. As a result, the allocated three and half years of project timespan of the Ethiopian PPP contractual agreement has reached its dead-end without conducting the inevitable 'Transfer Phase' timely based on their agreed plan. Such unintended episodes have also created lack of confidence amongst parties to enforce the transfer and takeover tasks. Consequently, options seem dried out and such phenomena later forced all actors to consider other alternative and available options to renegotiate and apply an extension of the same PPP initiative for more time.

Though a decision has recently been reached among partners after extensive re-negotiations on how to extend the timespan of the initiative for another additional two more years, all participating stakeholders are highly expected to be ready for the inevitable future 'Transfer Phase', even after the added two years of time. Otherwise, considering the worst case scenario, if early preparations and organizational readiness are disregard in advance of the transferring episodes then unquestionably the newly added two years would also end up without a fruitful transfer and takeover installment activities.

In an event when one of the partners is not prepared to take over or to transfer the delivery of the ongoing PIS system, unquestionably alternative actions might be considered by the actors. The takeaway lesson here is instead of looking for extensions to extend the PPP initiative's agreement by the time its deadline approaching, all parties should have striven and get ready in advance their system fully prepare according to the requirements.

In summary, of the above three observations (i.e., EP1, EP2, and EP3), an effort has been exerted in this study to identify and incorporate sector-based events between the private ICT sector and public sector agencies. Based on the findings exhibited in Chapter Four, the researcher has illustrated the major events in Figure 5-1. The figure also shows the past, the current, and the future concerns and aspects that are identified by the study.

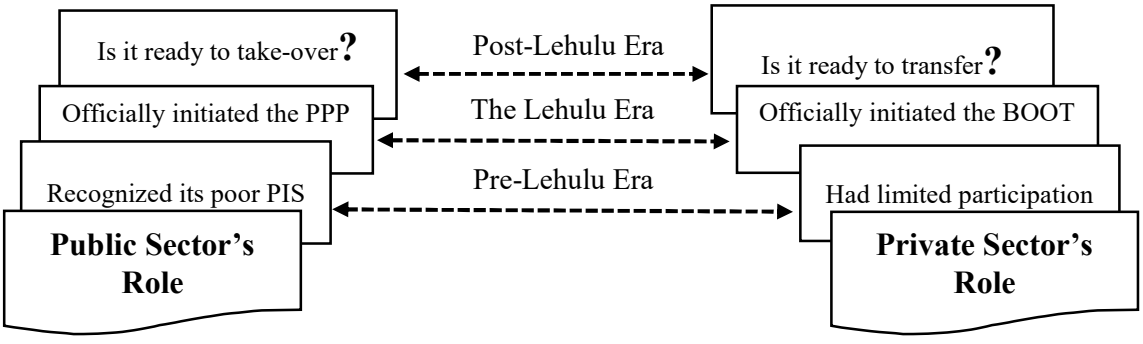

Figure 5-1: A Comprehensive Sectorial Analysis of the Case Study

Regarding the private sector's role, this study has also attempted to analyze observations on the root causes of problems that inhibit the promoting and creating of an enabling environment for the local private sector development. When any government is working in partnership with potential private sector, the impact of the alliance has many benefits. For example, some of the important private sector values into the public arena are efficiency, effectiveness, flexibility, openness, result oriented management, and accountability to enhance quality service delivery (Polidano, 2001). However, for decades the role of the Ethiopian private sector was limited due to the country's previous governments' tight policy, excluding the Imperial Era. Comparatively, the current administration has given due emphasis for the private sector to work with the government hand in hand. Gradually, the contribution of the Ethiopian private sector toward the transformation of electronic information systems and ICT infrastructure development started getting special attention by few public actors who have a technology background. As a result, the old mindset and attitude gaps toward the private sector is expected to continue narrow down as the differences between the Ethiopian public and private sectors significantly changing nowadays. One exemplar of the private sector's contribution in information systems development project would be the ongoing Lehulu PPP project. Nevertheless, among the existing open issues of the private sector and its counterpart the main are: how timely the actors of both partners can transfer and takeover the initiative simultaneously? This concern will get an answer in 2018 and beyond, as both sectors seem not ready at the moment either to transfer or takeover the initiative respectively. In sum, bearing in mind the worst case scenario procedures of the inevitable 'Transfer Phase', the major apprehension is that what would be expected to happen after five and half years of the overall ISP project lifetime. This is also an open question which is left to be filled by the coming researcher.

5.2 Summary of Observations

PPP is considered as a driver or enabler for rapid developments of a particular country. The role of the private sector can be also considered as a crucial alliance to fill the public service gaps which are beyond the capacity of the governmental agencies. However, some of the concerns of policy makers and practitioners are: how to work with the private sector, how to

engage with potential partners, how to assess the possibilities of PPPs, how to attract partners, how to introduce PPPs, how to implement PPPs, how to manage PPPs, how to monitor PPPs and evaluate PPPs in the developing world context. Thus, before, during, and after potential ISP agreements, partners should focus on ratifying the Critical Success Factors which are identified in this study (i.e., TCSFs and MCSFs). Table 5-1 summarizes the preceding sections and presents the TCSFs and MCSFs observed in the study.

Table 5-1: Summary

MCSFs	Areas of Concerns	Learned from Lehulu PPP
Executive Management in PPP	○ Who can initiate the partnership?	○ The Ethiopian government
	○ Who is the fiduciary of the public sector agencies?	○ The MCIT
	○ Are there PPP regulations and law?	○ Not yet existed in Ethiopia
Financial Management in PPP	○ How to secure finance for the PPP?	○ From local public banks
	○ Which banks are eligible to loan?	○ Governmental bank (CBE)
Knowledge Management in PPP	○ How to share the initiative's emerging data and information?	○ Office communication tools
	○ What mechanisms are needed to share the initiative's emerging knowledge among experts?	○ Knowledge Centers (not yet established officially)
Publicity Management in PPP	○ Who is responsible to communicate the status of the initiative?	○ The government PR
	○ How to handle communication gaps on the status of the PPP project?	○ Information Centers (not yet established officially)
Risk Management in PPP	○ Who is accountable to conduct a systematic risk assessment?	○ The fiduciary
	○ Who is in charge to follow up the initiative's overall progress?	○ The fiduciary
TCSFs	**Areas of Concerns**	**Learned in Lehulu**
'Build' Phase Management	○ Who is responsible to study the AS-IS structure to build the TO-BE?	○ The private sector
'Own' Phase Management	○ Which sector is allowed to own which PPP component output?	○ Still an open issue
'Operate' Phase Management	○ Who is responsible to operate the newly designed services?	○ The private sector
'Transfer' Phase Management	○ How to transfer the newly designed services?	○ Still an open issue
	○ Who is responsible to take-over the newly designed public services?	○ The public sector agencies
	○ Who is responsible to transfer the newly designed services back?	○ The private sector

5.3 Generating the Framework Development

This section generates and frames the conceptual framework by consulting the guiding theoretical lens of the research. This section also synthesizes the conceptual and theoretical approaches outlined in previous chapters in order to generate the proposed model.

The framework development of this case study is guided by Agency Theory. As presented in the literature review section 2.6.1, Agency Theory as a valuable theoretical lens has been used by various researchers including information systems researchers. To comprehend a partnership success and its critical factors that lead to a success of cooperation, especially on the various mutual interactions between parties such as governmental and private agencies in developing economies context, Agency Theory serves as a valuable theoretical lens in this research. Thus, based on the findings of this study, the components of the conceptual framework are framed and presented next.

5.3.1 Framing the Components of the Conceptual Framework

The components of the proposed conceptual framework are operationalized under this subsection. The major components that frame the proposed conceptual framework are: system, technical success factors (TCSFs), multidimensional success factors (MCSFs), negotiation, information asymmetry, and partnership success. Let's discuss each.

System: One of the challenges in *Systems Thinking* is the understanding of the term *system* itself. A system, thus, is a whole that cannot be divided into independent parts because every part of a system has properties. Therefore, a system is set of interrelated components connected together to form a whole, this showing properties which are properties of the whole rather than properties of its components (Checkland, 1981).

Technical Critical Success Factors (TCSFs): are referring to the factors that have an impact on how a project operates and are related to the technology used within the project development process (Doherty, 2012). Such different technical constraints or factors could determine the smooth delivery or implementation of

projects including ICT initiatives (Touray et al., 2013). The availability of technical support has also a positive effect on participation and willingness to implement and use electronic systems of new initiatives (Selim, 2007). In the same vein, success can be viewed from two vantage points: the degree to which the technical performance objectives are attained and the contribution that the project made (Cleland and Ireland, 2002). In this regard, TCSFs are important factors which should be considered in joint or partnership projects such as PPPs by setting technical boundaries in every phase of IS projects to frame the proper ways of success to the initiatives. For example, as partnership is a complex arrangement between the public and private sectors, actors usually expect to identify which vital technical factors might determine the success of their initiative's continuity.

Multidimensional Critical Success Factors (MCSFs): are referring to a multi-dimensional view of success factors which makes each more applicable in order to reach for a narrowed number of critical success factors that could increase their understandability and applicability in projects (Darwish and Rizk, 2015). Such a multidimensional concept is a powerful strategic weapon in determining the success of projects (Shenhar et al., 2001). In this regard, MCSFs can be viewed as significant factors which should be considered in the settling down of the feasibility of an IS partnership arrangement and further management boundaries which include financial and risk managements. For example, to initiate and follow up the stability of a partnership agreement such as PPPs, actors expect to identify which vital multidimensional managerial factors might determine the success of their initiative's commencement, continuity, and sustainability.

Negotiation: Given the variability in negotiating strategies, processes, and timing (Adair and Brett, 2005), different information systems scholars have frequently discussed and characterized the process of negotiation in various contexts. For instance, firms engage in depth negotiations and evidence discovery to reduce the risk of selecting the wrong partner (Gefen et al., 2008). Research also suggests that negotiators may not become more cooperative over time, even after receiving some information from the other party (reducing the other party's information asymmetry

advantage) (Dawson et al., 2016). More specifically, for example, any conflict of interest may exhibit during negotiations as parties may aspire to reach into a win-win level. Thus, in this study, the dimension of negotiation is defined as a crucial process which potentially determine the stability and success of a PPP initiative where all potential partnering parties conduct different round-table negotiations with or without a third party mediators or moderators to reach into an official signatory partnership agreement.

Information asymmetry: As discussed in detail in the literature review section (2.6.1), information asymmetry can be considered as the existence of unequal information during agreements or settlements when an agent/principal has more information than another agent/principal. Information asymmetry is bilateral, which means that both negotiating parties hold information that the other party lacks and, as a result, both parties have the means to be opportunistic (Dawson et al., 2016). Therefore, information asymmetry is a facilitating condition for opportunism (Wathne and Heide, 2000). Therefore, it is crucial to sensing out the degree of any potential threats of information asymmetry in order to determine the stability and success of a PPP initiative.

Partnership success: Evaluating and measuring the immediate implication of a partnership success in information systems projects requires an in-depth study of various factors which truly contribute to achieve the real success of the initiative's objectives. Ultimately, the measurement of information systems has been investigated throughout the information systems research community (Wang and Liao, 2008). Consequently, evaluation of the information systems has been a popular research area over the past years (Petter et al., 2012). However, there has not been a consensus on the concept or definition of a Partnership Success, specifically from the perspective of information systems discipline. Success is in the eye of the beholder (Al-Ahmed et al., 2009), thus a better way to realize such a *partnership success* in an information systems research is by observing all the values the project brought to the stakeholders that are involved in that partnership initiative, whether a national/federal regulation or law exist or not. Therefore, this study considers and

adopts the broad definition given by Baccarini (1999). A success in a project (for e.g., a PPP initiative) can be considered in terms of its both management success and product/service success where the former focuses on the successful accomplishment of finance, time, quality, and other relevant objectives whereas the latter focuses on the effects of the initiative's end product/service (Baccarini, 1999).

5.3.2 Dimensions of the Propositions

Utilizing the theoretical lens employed in this research, an attempt is made to develop a set of research propositions in this section. Particularly, after consulting the conceptual literature reviews, the propositions are also enriched based on the insights of the theoretical lens employed in this research. Drawing on the discussions of the results presented in Chapter Four and by taking into consideration the discussions made so far, the researcher has proposed the *Theory of IS Partnership Success* (TISPS). The conceptualized propositions are now presented as follows.

5.3.2.1 Negotiation

CSFs have the potential to determine the partnering and negotiating process of a PPP. Particularly, each categories of the CSFs (i.e., MCSFs & TCSFs), as pointed out in Chapter Four's section 4.2.1 and 4.2.2,) can shape the partnering process in a specific win-win way to satisfy both partnering parties' interest (i.e., self-interest and public interest). Predominantly, the MCSFs (Risk Management, Knowledge Management, Executive Management, Publicity Management, and Finance Management) are highly interdependent because the way these elements are applied in IS partnership initiative impact on the ability of both public agencies and private sector to maintain their trust on the envisioned PPP. Above all, since any negotiation and decision made on the MSFs may directly or indirectly affects the technical implementation process of the PPP initiative, based on the findings of this research, the follow-up process of every phase of the TCSFs (i.e., BOOT) is also governed in a continuous manner under the MCSFs. In other words, if the MCSFs are messed up then so do the TCSFs, and vice versa. Specifically, if actors intentionally or

unintentionally unmindful how to settle down the technical implementation procedures of the PPP model during the negotiation process of the partnership, then potential information asymmetry might exhibit and this in turn may lead to limitless project extensions or unnecessary project delays which one may easily perceive as a failure. Hence, in this study, MCSFs are outshined as core factors because the higher the effort of partnering parties exert on maintaining the MCSFs, the degree of information asymmetry in the PPP might be marginal. On the other hand, if stakeholders are too ambitious for their own good to fast-track and realize the partnering process, even without a national PPP law, then it is likely that the process may widely expose to various gaps, and as a result information asymmetry may manifest itself. This qualitative research is designed to fill in theses gaps, thus, the study offers P1, as also depicted in Figure 5-2, to determine the degree of information asymmetry in the PPP.

P1: *The magnitude of the MCSFs determines the degree of information asymmetry before, during, and after the negotiation of the PPP.*

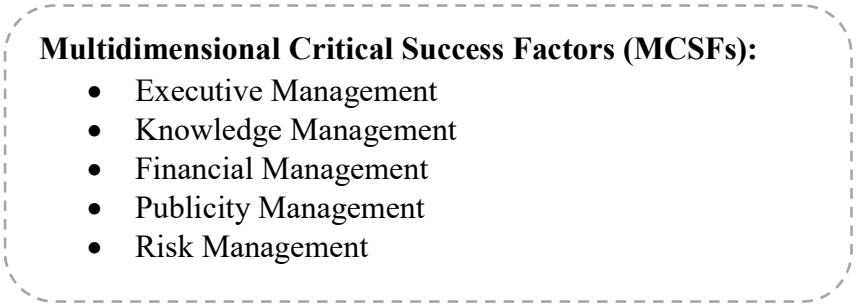

Figure 5-2: Multidimensional Critical Success Factors (MCSFs) of a PPP

From the perspective of the public agencies or the private sector, the scope of negotiation on technical aspects may also determine the ISP's fate. Similar to the comprehensive MCSFs assessment discussed in the preceding sections (i.e., chapter 4's sections 4.2.1 & 4.2.2 and chapter 2's sections 2.7.1 & 2.7.2, TCSFs are also crucial success factors which have the potential to determine the technical negotiating process of a PPP. Partners may raise critical

issues of a viable PPP such as how to design, how to own, how to operate, and how to transfer back the rehabilitated information systems and its public infrastructure to the public sector owners. Thus, every technicality issues in the partnership agreement must be addressed, discussed, agreed, and well documented for future reference.

The overall process of technical implementation assessment is also a difficult assignment in case a PPP regulatory framework does not exist. For example, testing the new systems' stability and its continuous follow-up also requires special taskforce or proper human resources management. Lack of high level local ICT professionals may indirectly affects the technical implementation process of the ISP project under the PPP initiative. For instance, one of the reasons that force partners to look for more project extension timeline is a gap that may exist in the agreement/settlement of both sides if both disregard the '*how to transfer and how to takeover*' aspects.

In general, in case of actors unaware to setup the technical implementation procedures of the PPP model during their negotiation process, it is likely that potential information asymmetry might be exhibit and consequently lead to a national mess, crisis, or project shutdown. In other words, unless partners or their experts possess the required knowledge for managing the technical implementation of the PPP, it might be obvious technical failures gradually disrupt the initiative's milestone because the higher the effort of partnering parties exert on maintaining the TCSFs amongst each other, the degree of potential information asymmetry might be marginal in the overall PPP process. This unnecessary consequence, if happened, can be considered as a failure because the initiative's objectives will not be achieved and the whole procedure might end up experiencing various potential information asymmetries. Therefore, the study offers P2, as also depicted in Figure 5-3, to determine the degree of information asymmetry in the PPP.

P2: *The magnitude of TCSFs determines the degree of information asymmetry before, during, and after the negotiation of the PPP.*

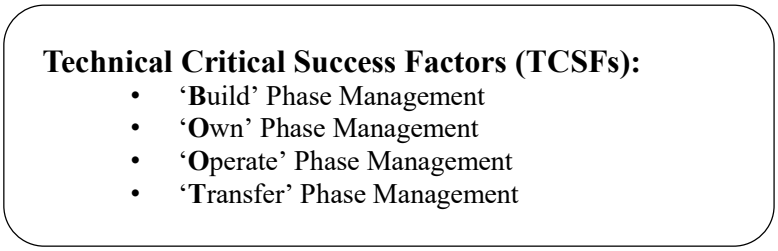

Figure 5-3: Technical Critical Success Factors (TCSFs) of a PPP

5.3.2.2 Information Asymmetry and Partnership Success

The core instrument to align conflicting objectives and to avoid opportunistic behavior (Grimshaw et al., 2002) is heavily relying on assessing the multidimensionality of the contractual agreement and the meticulousness of its components. In this regard, theoretical and practical accounts of the multidimensional scope of negotiation and the CSFs (i.e., TCSFs and MCSFs) may determine the degree of information asymmetry first, then depending on the degree of the actual information asymmetry exhibited in the partnership process, finally it may determine whether the ISP would be tend to success or not. In other words, *Partnership Success* is the result of all the procedures taken care of by actors to constrain potential information asymmetries during the process.

Studying the impact of *Partnership Success* is beyond the scope of the study because the Lehulu PPP initiative is still running and its final 'Transfer Phases' is not yet conducted by the current partners. Likewise, the term *Partnership Failure* is not incorporated in the study, rather based on the investigated critical factors this research potentially determines the degree of information asymmetry and any manifestation of gaps. Hence, the study offers P3, as also depicted in Figure 5-4, to determine the sustainability, continuity, and future success of the PIS project under the PPP. From the discourse so far, one may easily perceive that an ISP project under a PPP may end-up unsuccessful and the probability of its *Partnership Success* is uncertain if the existence of potential gaps may obviously create information asymmetry.

P3: *The degree of information asymmetry between the partners determines PPP success.*

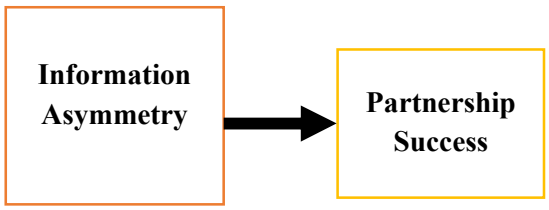

Figure 5-4: The impact of information asymmetry on *Partnership Success*

5.3.3 Summary of Propositions

To better understand a partnership success and its continuity factors that lead to a success, especially on the various mutual interactions between parties such as governmental and private agencies in a developing economy context, this section summarizes the propositions that shaped the development of the proposed *Theory of IS Partnership Success* (TISPS). These propositions are also clearly marked in Figure 5-4 following the summary of propositions presented in Table 5-3.

Table 5-2: Summary of the Propositions

Proposition No.	**Propositions**
1	*The magnitude of the MCSFs determines the degree of information asymmetry before, during, and after the negotiation of the PPP.*
2	*The magnitude of TCSFs determines the degree of information asymmetry before, during, and after the negotiation of the PPP.*
3	*The degree of information asymmetry between the partners determines PPP success.*

Drawing on the general discussions of the results presented so far and by taking into good consideration the propositions' (P1 – P3) elaborations in the preceding sections, the researcher has able to draw and propose the *Theory of IS Partnership Success* (TISPS)

model in Figure 5-5. The proposed model depicts that *Partnership Success* is the result of a genuine IS partnership negotiation process where partnering parties able to constrain the level of information asymmetry amongst each other by realizing the impact of both critical factors (i.e., MCSFs and TCSFs) before, during, and after their negotiations. Since the existence and level of advantageous behavior can be determined by the level of information asymmetry in the negotiation processes, actors recommended to conduct various preliminary studies such as readiness studies, feasibility studies, impact assessment studies, and system analysis studies using different methodologies to better understand their context, especially the demand of their needy population.

As presented in Figure 5-5, preliminary assessment of both the MCSFs and TCSFs are important inputs that could be reuse for other future IS partnership endeavors as well. Information systems development requires the input of such preliminary studies. Therefore, the resulting conceptual model (i.e., TISPS) can be used as a spring board for future theoretical deliberations by other information systems researchers. Above all, the resulting conceptual model can also serve as a guide for local practitioners of both the public/governmental and private companies for future ISP and PPP deliberations in Ethiopia or in a country with similar context of poor ICT infrastructure and poor PIS. In sum, PPP initiative is a serious business and agreement between the government and the private investors. Therefore, it requires special attention of research and development. Motivated with such principles, this research has an attempt to show the gap and produce the proposed TISPS model. Hence, testing and confirming the result of the model will be the task of forthcoming researchers or other concerned parties. As mentioned in the scope of the study (Chapter One, section 1.6), testing the model is beyond the scope of the study, rather developing and producing is the delimitation. Next, the proposed TISPS is presented in Figure 5-5.

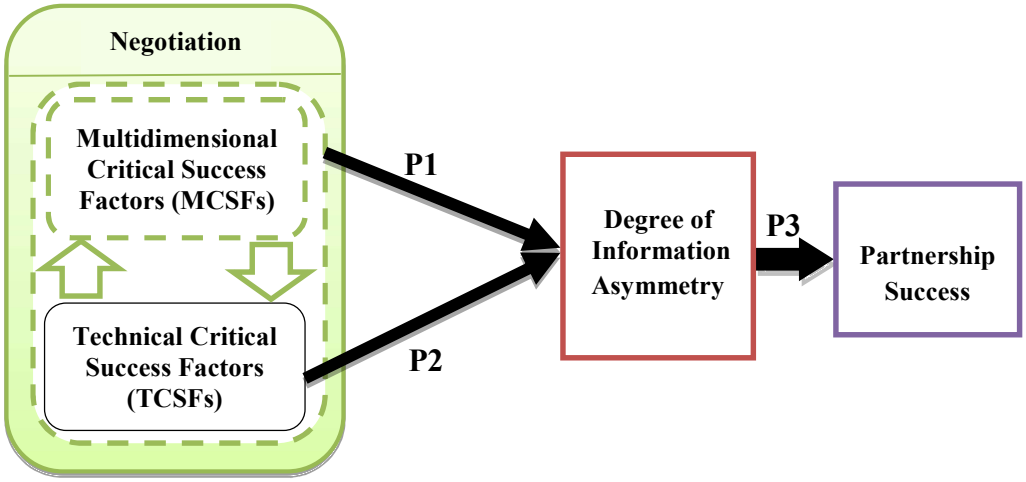

Figure 5-5: The proposed Theory of Information Systems Partnership Success (TISPS) model

5.4 Summary

This chapter has discussed in-depth the findings in the light of the background literature and the theoretical lens. The central research objective has been addressed by producing a conceptual framework. The proposed model's components are also operationalized and all propositions are clarified. The researcher has also attempted to conceptualize the critical factors (MCSFs and TCSFs) of a PPP. Consequently, an effort has been exerted to design and generate the *Theory of IS Partnership Success* (TISPS). Finally, TISPS is introduced. Chapter Six concludes the overall procedure of this study by discussing both the theoretical and practical contribution of this research, its limitations, and provides suggestions for further research.

CHAPTER SIX

CONCLUSION AND IMPLICATIONS

All preceding five chapters successively introduced the background of the study; the literature review; the research methodology; the discussion; and the research propositions. As a concluding last chapter, majority of the sections of this chapter provides a brief overview of the dissertation and the key findings of the study in connection with addressing the research question followed by a discussion on the objectives. The theoretical and practical implications of the study are also presented. In the end, the limitations of the research and further suggestions for future research are indicated. A section has also allocated for the summary of this chapter. The next section of the chapter begins with a brief overview of the dissertation.

6.1 Overview of the Study

One of the major issues that continue attracting the attention of information systems researchers is the case of several developing economies' ICT projects failure (Heeks, 2002). The reasons for such gaps and failures are multifaceted. This study is; therefore, designed to fill one of the gaps, namely the uncertainty of a partnership success in IS projects. Specifically, in the developing countries' context, addressing unrealistic and unsuccessful IS partnership pacts between governmental agencies and private companies are among the main concerns followed by poor attitude towards PPP initiatives' inception, negotiation, and implementation. Although exemplar attempts of ISPs under various PPP models have been made in the developing world such the Ethiopian Lehulu PPP, however, the critical open question is that *how to negotiate and get successfully make both sectors allies.* Accordingly, this study was initiated to examine the overall partnering process of Lehulu PPP by posing a research question in Chapter One with an objective to develop a *Theory of IS Partnership Success* (TISPS). Let's revisit once again the research question in this chapter in order to highlight the findings.

How do PPP factors account for IS partnership success in developing economies?

A successful PPP initiative starts with a successful negotiation among the agent and the principal with a win-win approach in mind. However, extant research indicates that relational contract violations occur in two forms: the inequitable sharing of emerging benefits and burdens and unilateral use of power (Dawson et al., 2011). Consequently, high degree of information asymmetry may occur in the process. Since information asymmetry is the root cause of various opportunistic behaviors, it is reasonable to expect that opportunism would exist (Dawson et al., 2011).Though, the role of information asymmetry in selecting constraint mechanisms has not been well examined (Dawson et al., 2011), controlling of opportunism requires addressing the problem of information asymmetry (Dawson et al., 2016). Factors that are found critical in constraining the degree of information asymmetry properly identified and categorized by this research, namely the MCSFs and TCSFs. Both categories of critical factors can potentially determine the degree of information asymmetry. As the *Partnership Success* depends on the degree of information asymmetry exhibited in the partnering process, still both success factors can determine the fate of the IS partnership between the public sector and private sector, specifically in the context of Ethiopia. Based on the findings of this study, a conceptual framework for *Partnership Success*, namely the *Theory of IS Partnerships Success*, is proposed. From the discussions so far, it is obvious that the research question of the study has been addressed.

With regard to addressing the objectives of the study, an attempt has been exerted to target and achieve the objectives which are mentioned in Chapter One. Let's revisit once again the research objectives in this chapter in order to highlight the findings.

- Conduct thorough literature reviews concerning the aspects of PPP, ISP, PIS, and CSFs;
- Clarify the misconceptions on the impact of PPPs and highlight the research gap;
- Discuss and develop testable propositions for further studies;
- Propose a theory of IS partnership success; and
- Offer both theoretical and practical contributions to the field.

In keeping with the positivist qualitative tradition, the researcher has adopted various strategies to conduct this research and achieve the objectives mentioned in the above box. Accordingly, to attain the objectives a thorough literature review was conducted throughout the study. As a result, the literature review part of this report highlights the general and specific issues regarding ISP, PPP, PIS, IT, CSFs, and related aspects in Chapter Two followed by putting clarifications regarding the misconceptions of PPPs and their impact. Besides, the first chapter of this report highlighted the exacerbating situation of the research gap in the developing economy. Furthermore, Chapter Five of this report discussed the testable propositions (i.e., P1 – P5) followed by presenting the proposed theory (i.e., TISPS). Finally, the study is now presenting next both theoretical and practical contributions of the research to the PPP and information systems field.

6.2 Potential Contributions of the Research

It is still questionable why information systems literatures or information systems researchers neglect investigating the continuity factors of PPP initiatives to determine the failure or success of IS partnerships. In an effort to reduce IS projects in poor countries including Ethiopia, the main contribution of this study to the information systems discipline and PPP knowledge base can be viewed in two vital ways: contributions to theory and knowledge, and contributions to practice. Both contributions are presented next.

6.2.1 Contributions to Theory and Knowledge

This research work develops a *Theory of IS Partnership Success* for understanding the process of partnering among public sector agencies and private sector and the associated outcome (success/failure). The proposed conceptual framework offers the capability to visualize information asymmetry events episodically and to signify the origin of various potential gaps among partners during and before any form of negotiation for partnership. Hence, the proposed framework may provide a novel perspective for looking *Partnership Success* in both ISP and PPP endeavors in poor countries.

While developing the TISPS, this research also considered the big picture of PPP as a well-known solution directly taken the concept from other fields such as the highway construction and health sectors to fill in an ISP gap, that is, empowering the third-world countries' governmental information systems development. The main contribution of this new insight to the scientific community is that based on the Agency Theory the study developed a comprehensive view on the PPP's CSFs (i.e., MCSFs and TCSFs) to generate a *Partnership Success* construct. Accordingly, ISP experts and PIS project managers may also use and implement the concepts and knowledge that are developed under this work.

6.2.2 Contributions to Practice

This study has diverse practical implications for PPP and ICT policy makers of the third-world countries, specifically in Ethiopia. Within any public-private collaboration, it is the negotiation phase that could determine the technical implementation and the success of IS projects. Hence, such negotiations firstly could consult preliminary studies using SSM strategies as inputs and secondly should consider the MCSFs and TCSFs to ensure their partnership's future success and sustainability. This research contributed on revealing the emergent insights on how to negotiate and what factors to consider in order designing a successful settlement of public-private cooperation. Therefore, this study can guide practitioners on how to build a favorable PPP policy and a PPP national regulatory framework. The study thus revealed open issues that need immediate intervention by the federal government. Actually, Ethiopia doesn't have a national PPP regulatory framework. Therefore, drafting the national PPP regulatory framework must also incorporate various private sector development programs. The researcher argues that this is the right time to design a PPP proclamation and decree before the private sector/agents turn their investment into other businesses.

In the same vein, this work also provides additional insights to local practitioners on how to better develop, build, design, and operate PIS initiatives based on PPP models. The framework may also provide a novel perspective for ICT practitioners to look at critical factors of re-negotiations in the process of forming ISP pacts with their counterparts.

Therefore, this research specifically offers knowledge and expertise on how to successfully reach the level of partnership success and serve a society with better electronic PIS.

The outcome of this study may also contribute to assessing alternative ways that could lead to successful governmental information service delivery approaches. As both the private sector and public organizations in developing countries need to pay attention to negotiations on PPP strategy and PPP policy issues, the prevalent partnership problems in improving the delivery of PIS to citizens in developing economies can be viewed through the lens and tools that this study proposed.

In general, to fill gaps regarding the governmental information services delivery demands, the outcome of this study may also contribute to PIS practitioners (both at organizations level and federal level), PIS project managers, ICT team leaders, PIS developers, PIS consultants etc. who can make use of the proposed framework as a lens to investigate the governmental structural readiness and the private sector potentials. As a result, potential tools and policies can be developed based on this study's outputs by subject matter experts that would enable governmental PIS practitioners to diagnose timely the civil service performances.

6.3 Summary of Limitations

Potential limitations have been identified in terms of the study's bias, question of generalizability, participants' selection, triangulation analysis, usage of systems and analytical tools. A statistical generalization was not the objective of the research due to the nature of the qualitative tradition. The question of generalizability is answered, confirmed, and getting accepted by different publications that the generalizability of a qualitative case study research is to the theory, not to a statistical generalization; rather the framework presented in this research can be applied for other similar contexts with poor ICT infrastructure and poorly designed PIS deliveries.

As a doctoral researcher who has actively involved in locally failed and succeeded ICT projects, some interpretations of this work may have been influenced by such firsthand

experiences. Hence, the researcher restrain himself from claiming that his understanding and case interpretations were free from biases, rather the researcher made triangulations, literature reviews, and continuous discussions with participants to avoid and constrain such unintended biases. Hence, the participants' selection process was based on a purposive sampling to deliberately conduct the interviews with concerned governmental actors, the private agent staff, and local beneficiaries.

This exploratory study adopted a single case study approach to examine both the private and public sectors. However, no matter how rigorous efforts exerted on the overall processes of the study, it might not cover all complex issues of the PPP comprehensively. Since this study is considered as one of the attempts to contribute to the ongoing PPP endeavors among the Ethiopian public and private actors, one may probably suspect that dealing with such in-depth research in the well-known third-world bureaucratic governmental issues might have potential limitations or consequences. However, with all the support of all participant actors this study has been successfully explored based on the publicly available evidences exhibited in the study context.

Due to the existence of a single national ISP under the ongoing PPP (i.e., the Lehulu PPP) which has been initiated to transform the Ethiopian poor public information systems, it was difficult/impossible to consider other PPPs by the researcher. As a result of such limitation, the researcher did not intend to develop a questionnaire to validate the proposed conceptual framework. One may see that there are opportunities for future validation deliberations by coming IS researchers either to validate, extend or evaluate the proposed conceptual framework. Moreover, this dissertation analyzed approximately the first four years, excluding the inevitable 'Transfer Phase', of the partnership process between the government and the private firm by conducting interviews and analyzing historical documents.

6.4 Suggestions for Further Research

As mentioned in section 6.2, this research aims to contribute to the domain of information systems in general and PPP in particular by adding new insights into the IS literature by uncovering success/failure contributing critical factors of a PPP initiative. Although the outcome of this research can also be used as a spring-board for practical implementations, but still there are opportunities for future theoretical deliberations by other IS and PPP researchers to extend or evaluate the proposed conceptual framework. In a larger perspective, still the core question to fill one of the gaps of a PPP exertion is: *how better to negotiate and make allies both the public agencies and potential local private sector of the low-income countries in order to transform and deliver reliable and quality electronic public information channels to their needy citizens?*

By offering a set of research propositions in Chapter Five, this research is aimed at theory development (i.e., TISPS). However, the proposed TISPS needs further empirical validation from different angles. Thus, either a quantitative or qualitative or mixed approach research is required to examine and confirm the outcome of this study in various contexts including in countries with poor economic and technology status as that of Ethiopia. Furthermore, this work studied the entire partnership process, excluding the inevitable 'Transfer Phase' of the ISP, between the governmental agencies and the private firm. As newly emerged IS partnership challenges might be happening during or after the inevitable 'Transfer Phase', therefore, longitudinal studies could be required to explore additional insights into the proposed TISPS over the whole partnership timeline. Additionally, further studies are also required in different contexts with or without the availability of a national PPP regulatory framework in order to strengthen and improve the findings of this research. In sum, information systems researchers can make use of the presented theoretical model to make use of and conduct a thorough future investigation on the overall improvement of the proposed model.

6.5 Summary

As a concluding last chapter, most of the sections of this chapter provided a brief overview of the dissertation and the key findings of the study in connection with addressing the research question followed by discussions on the objectives. The theoretical and practical implications of the study are also presented. In the end, the limitations of the research and further suggestions for future research followed by a summary are indicated.

References

Ababutain, A. Y. (2002). *A multi-criteria decision-making model for selection of BOT toll road proposals within the public sector* (Doctoral Dissertation). Civil and Environmental Engineering Department, University of Pittsburgh. Available from ProQuest Dissertations and Theses database.

Adair, W. L., and Brett, J. M. (2005). The negotiation dance: Time, culture, and behavioral sequences in negotiation. *Organization Science*, 16(1), 33-51.

AIA (2014). *Public-Private Partnerships for public facilities. Legislative resource guide*. The American Institute of Architects (AIA). November 2014 publication. Retrieved from http://www.aia.org/ on July 2016.

Al-Ahmed, W., Al-Fagih, K., Khanfar, K., Alsamara, K., Abuleil, S., and Abu-Salem, H. (2009). A taxonomy of an IT project failure: root causes. *International Management Review*, 5(1), 93-104.

Algarni, A.M., Arditi, D., and Polat, G. (2007). Build-Operate-Transfer in infrastructure projects in the United States. *Journal of Construction Engineering and Management*, 133(10), 728-735.

Al-Huan, O. (2012). Toward the utilization of m-Government services in developing countries: a qualitative investigation. *International Journal of Business and Social Science*, 3(5).

Allen, B. A., Juillet, L., Paquet, G., and Roy, J. (2001). E-Governance and government on-line in Canada: Partnerships, people and prospects. *Government Information Quarterly*, 18(2), 93-104.

Alter, S. (2000). The Siamese twin problem: A central issue ignored by dimensions of information effectiveness. *Communication of AIS*, 2(20), 1-55.

Alshehri, M., and Drew, S. (2010). e-Government fundamentals. In *IADIS International Conference ICT, Society and Human Beings*. ISBN: 978-972-8939-20-5.

Andrade, A. D. (2009). Interpretive research aiming at theory building: Adopting and adapting the case study design. *The Qualitative Report*, 14(1), 42.

Arnold, R. D., and Wade, J. P. (2015). A definition of systems thinking: a systems approach. *Procedia Computer Science*, 44, 669-678.

Ashcroft, K. (2007). Public-Private Partnership in Ethiopian higher education: An analysis of support the private sector needs to fulfill its potential contribution to the expansion of higher education. *Proceeding of the 5th national conference on private higher education*

institutions in Ethiopia, 138-160. St. Mary's University College. Addis Ababa, Ethiopia, August 25, 2007.

Atkins, C. and Sampson, J. (2002). Critical appraisal guidelines for single case study research. *Proceedings of the Xth European Conference of Information Systems* (ECIS)*,* 15, Gdańsk, Poland, June 6-8, 2002.

Ayenachew, A. (2010). Public Private Partnership (PPP): Some reflections on Ethiopian higher education. *The Ethiopian Journal of Business and Economics*, 1(1), 144-169.

Babatunde, O. S., Opawole, A., and Emmanuel Akinsiku, O. (2012). Critical success factors in public-private partnership (PPP) on infrastructure delivery in Nigeria. *Journal of Facilities Management*, 10(3), 212-225.

Baccarini, D. (1999). The logical framework method for defining project success. *Project Management Journal*, 30(4), 25-32.

Bhatnagar, S. (2014). *Public service delivery: Role of information and communication technology in improving governance and development impact*. ADB Economics Working Paper Series Number 391. Manila: Asian Development Bank. ISSN 1655-5252

Baiman, S., and Rajan, M. V. (2002). Incentive issues in inter-firm relationships. *Accounting, Organizations and Society*, 27(3), 213-238.

Balkin, D. B., Markman, G. D., and Gomez-Mejia, L. R. (2000). Is CEO pay in high-technology firms related to innovation? *Academy of management journal*, 1118-1129.

Bannister, F., and Remenyi, D. (2003). The societal value of ICT: First steps towards an evaluation framework. *Electronic Journal of Information Systems Evaluation*, 6(2), 197-206.

Barnea, A., Haugen, R. A., and Senbet, L. W. (1981). Market imperfections, agency problems, and capital structure: A review. *Financial Management*, 7-22.

Bassellier, G., Reich, B., and Benbasat, I. (2001). Information technology competence of business managers: A definition and research model. *Journal of Management Information Systems*, 17, 159-182.

Baxter, P., and Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report,* 13(4), 544-559. Retrieved from www.nova.edu/ on July 2016.

Benbasat, I., Goldstein, D. K., and Mead, M. (1987). The case research strategy in studies of information systems. *MIS quarterly*, 11(3), 369-386.

Bendell, J. (2006). NGLS Development Dossier: Debating NGO accountability. Geneva: UN Non-Governmental Liason (NGLS). Retrieved from http://unngls.org/pdf/ on June 2016.

Bendor, J., Glazer, A., and Hammond, T. (2001). Theories of delegation. *Annual Review of Political Science*, 4(1), 235-269.

Bennett, W. L., and Howard, P. N. (2008). Evolving Public-Private Partnerships: A New Model for e-Government and e-Citizens. Partnerships for Technology Access. Microsoft Corporation. [Online version], Retrieved from http://workspace.unpan.org/ on July 2016.

Benz, A., Grout P., and Halonen, M. (2001). What should the state buy?" CMPO Working Paper No. 01/40, University of Bristol.

Bezabeh, A., and Desta, A. (2014). Banking sector reform in Ethiopia. *International Journal of Business and Commerce*. Paper 96, 3(8), 25-38 (ISSN: 2225-2436). Retrieved from http://scholar.dominican.edu/ on June 2016.

Bhatnagar, S. (2000). Social implications of information and communication technology in developing countries: Lessons from Asian success stories. *The Electronic Journal of Information Systems in Developing Countries*, 1(4), 1–9.

Blaiklock, M. (2003). An introduction to PPP. Public Private Partnerships: A Review of the key issues. *European Construction Institute*. Loughborough: Loughborough University, 7-12.

Blair, J. D., Rock, T. T., Rotarius, T., Fottler, M. D., Bosse, G. C. and Driskill, J. M. (1996). The problematic fit of diagnosis and strategy for medical group stakeholders. *Health Care Management Review*, 21(1), 7-28.

Boeva, B. and Vassileva, A. (2008). Public-Private Partnerships: Formulae for success, incentives and barriers. *Economic Alternatives*, Issue 2.

Bouckaert, G. and Halachmi, A. (Eds.) (1995). The enduring challenges in public management: surviving and excelling in a changing world. San Francisco, CA: Jossey-Bass.

Bovaird, T. (2004). Public–Private Partnerships: From contested concepts to prevalent practice. *International Review of Administrative Sciences*. 70(2), 199–215. IIAS: SAGE Publications.

Boynton, A. C., and Zmud, R. W. (1984). An assessment of critical success factors. *Sloan Management Review*, 25(4), 17-27.

Braa, J., Monteiro, E., and Sahay, S. (2004). Networks of action: Sustainable health information systems across developing countries. *MIS Quarterly*, 28(3), 337-362.

Bridgman, P. and Davis, G. (2004). *The Australian Policy Handbook* (3rd Ed.). Sydney.

Brinkerhoff, D. W., and Brinkerhoff, J. M. (2011). Public–Private Partnerships: Perspectives on purposes, publicness, and good governance. *Public Administration and Development*, 31(1), 2-14.

Brown, M. M. and Brudney, J. L. (2001). Achieving advanced electronic government services: An examination of obstacles and implications from an international perspective. Paper Presented at the National Public Management Research Conference, Bloomington.

Bryers, C. R. and Blume, D. (1994). Tying critical success factors to systems development: A contingent analysis. *Information and Management,* 26, 51–61.

Burke, M.E. (2007). Making choices: Research paradigms and information management (IM); practical applications of philosophy in IM research. *Library Review*, 56 (6).

Buse, K., and Walt, G. (2000). Global Public-Private Partnerships: Part II-What are the health issues for global governance? *Bulletin of the World Health Organization*, 78(5), 699-709.

Butler, T. and Fitzgerald, B. (1999). Unpacking the systems development process: An empirical application of the CSF concept in a research context. *Journal of Strategic Information Systems*, 8, 351-371.

Butler, T., and Fitzgerald, B. (1998). New light through old windows: The interpretive foundations of the critical success factor concept and method. In: *Hackney, R. (Ed.). Business Information Management: Adaptive Futures, The Proceedings of the Eighth Annual BIT Conference*, Manchester Metropolitan University, Manchester, UK (10pp).

Byrne, J. and Davis, G. (1998). *Participation and the NSW Policy Process*. The Cabinet Office, Sydney.

Calabrese, D. (Ed.). (2008). Strategic communication for privatization, Public-Private Partnerships, and private participation in infrastructure projects. *World Bank Publications 139*.

Checkland P. (1981). *Systems Thinking, Systems Practice*. Chichester: John Wiley & Sons.

Checkland, P. (1985). From optimizing to learning: a development of systems thinking for the 1990s. *Journal of the Operational Research Society*, 757-767.

Checkland, P. (1999). Systems thinking. *Rethinking Management Information Systems*, 45-56.

Checkland, P. (2000). Soft systems methodology: A 30 year retrospective. *Systems Research and Behavioral Science*, 17, 11-58.

Checkland, P., and Holwell, S. E. (1998). Action research: Its nature and validity. *Systemic Practice and Action Research*, 11(1), 9-21.

Checkland, P. and Scholes, J. (1990). *Soft systems methodology in action*. Chichester: Wiley.

Checkland, P., and Scholes, J. (1999). *Soft systems methodology: A 30-year retrospective*. Chichester: Wiley.

Chetty, S. (1996). The case study method for research in small- and medium-sized firms. *International Small Business Journal*, 15(1), 73-85.

Cheung E., Chan A., Kajewski S. (2009). Reasons for implementing Public-Private Partnership projects: Perspectives from Hong Kong, Australian and British practitioners. *Journal of Property Investment and Finance*, 1, 81-95.

Cheung, E. (2009). *Developing a best practice framework for implementing Public Private Partnerships (PPP) in Hong Kong* (Unpublished doctoral dissertation). Queensland University of Technology, Queensland.

Cleland, D. I. and Ireland, L. (2002). *Project management: Strategic design and implementation* (4th ed, Volume 1). New York: McGraw-Hill.

Coleman S. (2006). *African e-Governance – Opportunities and challenges*. UK: Oxford University Press.

Cong, X. and Pandya, K. V. (2003). Issues of knowledge management in the public sector. *Electronic Journal of Knowledge Management*, 1(2), 25-33.

Cordella, A. and Willcocks, L. (2010). Outsourcing, bureaucracy and public value: Reappraising the notion of the "Contract State". *Government Information Quarterly*, 27(1), 82-88.

Corrigan, M., Hambene, J., Hudnut, W., Levitt, R., Stainback, J., Ward, R., Witenstein, N. (2005). *Ten principles for successful Public/Private Partnerships*. Washington, D.C.: Urban Land Institute (ULI).

Craig, D. (2010). *Australian Financial Accounting* (6th Edition). McGraw-Hill: New York.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five traditions* (2nd Ed.). Thousand Oaks, CA: Sage.

Curtin, G. G. (2007). *E-government*. Encyclopedia of Political Communications, Sage Publications.

Dada, D. (2006). The failure of e-government in developing countries: a literature review. *The Electronic Journal on Information Systems in Developing Countries*, 26(7), 1-10.

Darke, P., Shanks, G. and Broadbent, M. (1998). Successfully completing case study research: Combining rigor, relevance and pragmatism. *Information Systems Journal*, 8, 273-289.

Darwish, N. R and Rizk, N. M. (2015). Multidimensional success factors of agile software development projects. *International Journal of Computer Applications*, 118 (15), 23-30.

Das, S., Sen, P. K. and Sengupta, S. (2003). Strategic alliances: A valuable way to manage intellectual capital? *Journal of Intellectual Capital*, 4(1), 10-19.

Dawson, G. S., Watson, R. T., and Boudreau, M. C. (2011). Information asymmetry in information systems consulting: Toward a theory of relationship constraints. *Journal of Management Information Systems*, 27(3), 145-180.

Dawson, G; Watson, R. T., Boudreau, M. C., and Pitt, F. L. (2016). A knowledge-centric examination of signaling and screening activities in the negotiation for information systems consulting services. *Journal of the Association for Information Systems*, 17(2), 78-106.

Davies, R. (2015). e-*Government: Using technology to improve public services and democratic participation*. European Parliamentary Research Service. European Union, EPRS: PE 565.890. ISBN 978-92-823-6814-5. Retrieved from www.europarl.europa.eu on September 2016.

De Palma, A.; Leruth, L.; and Prunier, G. (2009). Towards a principal-agent based typology of risks in Public-Private Partnerships. International Monetary Fund: IMF Working Paper WP/09/177.

Debretsion Gebremicheal (2012). *ICT Initiatives in Ethiopia*. UNPAN049909, (Unpublished).

Deetz, S. (1996). Describing differences in approaches to organization science: rethinking Burrell and Morgan and their legacy. *Organization Science*, 7(2), 191-207.

Deloitte and Touche (2014). The future of telecoms in Africa: The "*blueprint for the brave*". Johannesberg: Deloitte & Touche Ltd.

Deloitte Research (2006). Closing American's infrastructure gap: The role of Public-Private Partnership. (Online version). Retrieved from www.deloitte.com on September 2016.

Denzau, A. T., and North, D. C. (1994). Shared mental models: Ideologies and institutions. *Kyklos*, 47, 3-31.

Denzin, N. K. and Lincoln, Y. S. (1994). *Handbook of qualitative research*. Thousand Oaks, London: Sage.

Dobson, P. (2001). The philosophy of critical realism: An opportunity for information systems research. *Information Systems Frontiers*, 3(2), 199-210.

Doherty, M. (2012). *Examining project manager insights of agile and traditional success factors for information technology projects: A Q-Methodology study.* (Unpublished doctoral dissertation). Marian University.

Domberger, S. and Jensen P. (1997). Contracting out by the public sector: Theory, evidence, prospects. *Oxford Review of Economic Policy*, 13(4), 67–78.

Dubé, L., and Paré, G. (2001). Case research in information systems: Current practices, trends, and recommendations. *Cahier du GReSI*, 1(12). ISSN 0832-7203.

Dulaimi. M. F., Alhashemi, M., Ling, F.Y.Y, and Kumaraswamy, M. (2010). The execution of the Public-Private-Partnership Projects in the UAE. *Construction Management and Economics*, 28, 393-402.

Egbewole, A. Q. (2011). *Examining Public Private Partnership in Nigeria: Potentials and challenges* (Unpublished Master's thesis). University of Ilorin, USA.

Eisenhardt, K. M. (1988). Agency-and institutional-theory explanations: The case of retail sales compensation. *Academy of Management journal*, 31(3), 488-511.

Eisenhardt, K. M. (1989a). Building theories from case study research. *Academy of Management Rev*iew, 14(4), 532-555.

Eisenhardt, K. M. (1989b). Agency theory: An assessment and review. *Academy of Management Review*, 14(1), 51–74.

El Khatib, M. M. (2014). Knowledge management system: Critical success factors and weight scoring model of the technical dimensions. *International Journal of Applied Information Systems (IJAIS),* 7(9), ISSN: 2249-0868.

Emmanuel, O. O. (2014). Critical Success Factors (CSF): Determining the implementation of Public-Private Partnership projects. *Covenant Journal of Research in the Built Environment* (CJRBE), 1(2).

ESCAP (2011). *A guidebook on Public-Private Partnership in infrastructure*. United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Bangkok, Thailand.

FDRE (1998). *Federal Negarit Gazetta of the Federal Democratic Republic of Ethiopia: Privatization of Public Enterprise Proclamation*, Proclamation No. 146/1998. Addis Ababa.

Fischer, K. and Alfen, W. (2009). Incentive and payment mechanisms as part of risk management in PPP contracts. *Journal of Interdisciplinary Property Research*, 1, 5-25.

Flick, U. (2009). *An Introduction to Qualitative Research* (4th Ed.). London: Sage.

Flinders, M. (2005). The politics of Public-Private Partnerships. *The British Journal of Politics and International Relations*, 7(2), 215-239.

Flowerday, S., and Von Solms, R. (2005). Real-time information integrity = System integrity + Data integrity + Continuous assurances. *Computers & Security*, 24(8), 604-613.

Flynn, D., and Arce, E. (1997). A CASE tool to support Critical Success Factors analysis in IT planning and requirements determination. *Information and Software Technology*, 39, 311-321.

Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219-245.

Gallegos, D. (2012). Partnerships for broadband: Innovative Public-Private Partnerships will support the expansion of broadband networks. *ICT Policy Notes*, Note 2, Washington, DC: World Bank. Retrieved from http://siteresources.worldbank.org/ on August 2016.

Galliers, R. (1992). *Information systems research: Issues, methods and practical guidelines*. Oxford, UK: Blackwell.

Guasch, J. L., Laffont, J. J., and Straub, S. (2007). Concessions of infrastructure in Latin America: Government-led renegotiation. *Journal of Applied Econometrics*, 22(7), 1267-1294.

Gefen, D., Wyss, S., and Lichtenstein, Y. (2008). Business familiarity as risk mitigation in software development outsourcing contracts. *MIS Quarterly*, 32(3), 531 - 551.

Gerring, J (2007). *Case study research: Principles and practices*. New York: Cambridge University Press.

Glaser, B. G., and Strauss, A. L. (1967). The discovery of grounded theory: Strategies for qualitative research. Piscataway, NJ: Transaction.

Goldberg, V.P. (1976). Towards an expanded theory of contract. *Journal of Economic Issues*, 10(1), 45-61.

Grant, R. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal* 17, 109-122.

Gregor, S. and Hevner, A. (2013). Positioning and presenting design science research for maximum impact. MIS Quarterly, 37(2).

Gregory, F. H. (1993). Cause, Effect, Efficiency and Soft Systems Models. *Journal of the Operational Research Society*, 46, 562-578.

Gregor, S., and Hevner, A. R. (2013). Positioning and presenting design science research for maximum impact. *MIS quarterly*, 37(2), 337-355.

Grimsey, D. Lewis, M. K. (2002). Evaluating the risks of Public-Private Partnerships for infrastructure projects. *International Journal of Project Management*, 20, 107-18.

Grimsey, D., and Lewis, M. (2004). *Public-Private Partnerships: The worldwide revolution in infrastructure provision and project finance*. Cheltenham: Edward Elgar Publishing.

Grimshaw, D., Vincent, S., and Willmott, H. (2002). Going privately: Partnership and outsourcing in UK public services. *Public Administration*, 80(3), 475-502.

GSMA (2015). *The Mobile Economy Sub-Saharan Africa 2015*. London. Retrieved from https://www.gsmaintelligence.com on June 2016.

Guasch, L. (2004). *Granting and renegotiating infrastructure concessions*. WBI Development Studies. Washington, D.C.: The World Bank.

Gunnigan, L., and Eaton, D. (2008). Barriers to Innovation in Public-Private Partnerships (PPP). COBRA 2008 Conference, 5 September 2008, Dublin, Ireland

Hall, D. (2008). *PPPs in the EU: A critical appraisal*. Public Services International Research Unit (PSIRU).

Hall, D. (2008). PPPs in Europe-A critical appraisal. *In Public Services International Research Unit (PSIRU)*, Business School, University of Greenwich, mimeo, Presented at ASPE Conference St. Petersburg October-November 2008. Retrieved from http://gala.gre.ac.uk/ on July 2016.

Algozzine, B., and Hancock, D. R. (2006). Doing case study research. *Doing case study research*, 31-44.

Harfouche, A. and Kalika, M. (2009). E-Government implementation and acceptance: challenges to increase public e-services take-up in Lebanon. *AMCIS 2009 Proceedings*.

Hart, O. (2003). Incomplete contracts and public ownership: remarks, and an application to Public-Private Partnerships. *The Economic Journal*, 113(486), 69-76.

Heeks, R. (2002). Information systems and developing countries: failure, success, and local improvisation. *The Information Society*, 18(2), 101-112.

Hendrikse, G. (2003). *Economics and management of organizations: Co-ordination, motivation and strategy*. New York: McGraw-Hill.

Hevner, A., March, S., Park, J., and Ram, S. (2004). Design science in information systems research. *MIS quarterly*, 28(1), 75-105.

Hodge, G. A., and Greve, C. (Eds.) (2005). The challenge of public-private partnerships: Learning from international experience. Edward Elgar Publishing.

Hussen, M. (2013). Public-Private Partnerships (PPPs) as collective action for improved urban environment governance in Ethiopia. *Journal of Economics and Sustainable Development*, 4(10), 59-66.

Iivari, J., Hirschheim, R., and Klein, H. K. (1998). A paradigmatic analysis contrasting information systems development approaches and methodologies. *Information Systems Research*, 9(2), 164-193.

Iivari, J. (2007). A paradigmatic analysis of information systems as a design science. *Scandinavian Journal of Information Systems*, 19(2), 5.

Iivari, J. (2005). An empirical test of the DeLone-McLean model of information system success. *ACM Sigmis Database*, 36(2), 8-27.

Imtiaz, A., Al-Mudhary, A. S., Mirhashemi, T., Ibrahim, R. (2013). Critical success factors of information technology projects. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 7(12), 3154-3158.

InfoDev (2002). *The e-Government Handbook for Developing Countries*. A project of Info Dev and The Center for Democracy & Technology. Retrieved from www.infodev.org/ on March 2016.

Iossa, E., and Martimort, D. (2012). Risk allocation and the costs and benefits of public--private partnerships. *The RAND Journal of Economics*, 43(3), 442-474.

Ismail, S. (2013). Critical success factors of public private partnership (PPP) implementation in Malaysia. *Asia-Pacific Journal of Business Administration*, 5(1), 6-19.

ITU and OECD (2011). *M-government: Mobile Technologies for Responsive Governments and Connected Societies*. Paris: OECD Publishing.

Jacobsen, C. and Choi, S. O. (2008). Success factors: public works and public-private partnerships. *International Journal of Public Sector Management*, 21(6), 637-657.

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

James, A. D., Cox, D., and Rigby, J. (2005). Testing the boundaries of public private partnership: The privatization of the UK defense evaluation and research agency. *Science and public policy*, 32(2), 155-161.

Janssen, M., Joha, A., and Zuurmond, A. (2009). Simulation and animation for adopting shared services: Evaluating and comparing alternative arrangements. G*overnment Information Quarterly*, 26(1), 15-24.

Jomo, K. S., Chowdhury, A., Sharma, K., and Platz, D. (2016). *Public-Private Partnerships and the 2030 Agenda for Sustainable Development: Fit for purpose?* United Nations, Department of Economic and Social Affairs.

Jennex, M. E. and Adelakun, O. (2003). Success factors for offshore information system development. *Journal of Information Technology Cases and Applications*, 5(3), 12-31.

Jennex, M. E., and Zyngier, S. (2007). Security as a contributor to knowledge management success. *Information Systems Frontiers.* 9(5), 493-504.

Jensen, M. C., and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal Of Financial Economics*, 3(4), 305-360.

Jensen, M. (1983). Organization Theory and Methodology. *Accounting Review*, 58 (2), 319–39.

Jensen, M. C., and Meckling, W. H. (1992). Specific and general knowledge and organizational structure. *Contract Economics*, Lars Werin and Hans Wijkander (Eds.), 251-274, Oxford: Blackwell.

Jensen, M. C. (1994). Self Interest, Altruism, Incentives, and Agency Theory. *Journal of Applied Corporate Finance*. Retrieved from SSRN at https://ssrn.com/ on July 2016.

Jensen, M. C. and Meckling, W. H. (1994). The nature of man. *Journal of Applied Corporate Finance*, 7(2), 4 -19.

Jerzemowska, M. (2006). The Main Agency Problems and Their Consequences. *Acta Oeconomica Pragensia*, 3, 9-17.

Johnson, R. A., and Greening, D. W. (1999). The effects of corporate governance and institutional ownership types on corporate social performance. *Academy of Management Journal*, 42(5), 564-576.

Johnson, P., Buehring, A., Cassell, C., and Symon, G. (2007). Defining qualitative management research: an empirical investigation. *Qualitative Research in Organizations and Management: An International Journal*, 2(1), 23-42.

Jütting, J. (1999). Public-private-partnership and social protection in developing countries: The case of the health sector. *In ILO workshop on 'The extension of social protection'*, 13, 14-12.

Kaplan, B. and Maxwell, J.A. (1994). Qualitative research methods for evaluating computer information systems in evaluating health care information systems: Methods and applications, J. G. Anderson, C. E. Aydin, and S. J. Jay (Eds). Thousand Oaks, CA: Sage, 45-68.

Kernaghan, K. (1993). Partnership and public administration: Conceptual and practical considerations. *Canadian Public Administration*, 36(1), 57-76.

Keyter, C. (2010). Perceptions of stakeholders involved in a public-private partnership arrangement: A case study of solid waste management in the City of Windhoek, Namibia. *Journal of Public Administration*, 45(1), 18-29.

Kifiya (2006). *Lehulu: Electronic Services Initiative*. Kifiya Financial Technology PLC. Retrieved from www.kifiya.com on October 2016.

Kim, Y., Yoon, J., Park, S., and Han, J. (2004). Architecture for implementing the mobile government services in Korea. *In International Conference on Conceptual Modeling*, 601-612. Berlin: Springer.

Kitaw, Y. (2006). E-Government in Africa: Prospects, challenges and practices. *International Telecommunication Union.*

Klein, H. K., and Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS quarterly*, 67-93.

Klijn, E. H., and Teisman, G. R. (2000). Governing public-private partnerships: Analyzing and managing the processes and institutional characteristics of public-private partnerships. *Routledge Advances in Management and Business Studies*, 19, 84-102.

Klijn, E. H., and Teisman, G. R. (2003). Institutional and strategic barriers to public-private partnership: An analysis of Dutch cases. *Public money and Management*, 23(3), 137-146.

Kooiman, J. (Ed.) (1993). *Modern Governance: New Government–Society Interactions*. London: Sage.

Koutsikouri, D., Dainty, A., and Austin, S. (2006). Critical success factors for multidisciplinary engineering projects. In: *Boyd, D (Ed) Proceedings 22nd Annual Association of Researchers in Construction Management Conference (ARCOM)*, 4-6 September 2006, Birmingham, UK, 219-228.

Kroeze, J. H., and Van Zyl, I. (2015). The Theme of Hermeneutics in IS–The Need for a Structured Literature Review. *Twenty-first Americas Conference on Information Systems*, Puerto Rico, August 13-15, 2015. AMCIS 2015 ISBN: 978-0-9966831-0-4

ModuKumshe, H., Magaji, B.Y., Bani, L. M. (2015). Public-Private Partnership and Nigeria's Infrastructural Development: a Panacea for Economic Growth. International Journal of Humanities Social Sciences and Education (IJHSSE), 2(10), 87-98.

Kumar, R. (2005). *Research Methodology – A step-by-step Guide for Beginners* (2nd Ed). London: SAGE Publications Inc.

Kuscu, M. H., Kushchu, I., and Yu, B. (2008). Introducing Mobile Government. In A. Anttiroiko (Ed.), *Electronic Government: Concepts, Methodologies, Tools, and Applications*, 227-235. IGI Global.

Kvale, S. (1996). *InterViews – An introduction to qualitative research interviewing*. Thousand Oaks, London: Sage Publications.

Kwak, Y. H. (2002). Critical success factors in international development project management. *Proceedings of 10th International Symposium Construction Innovation & Global Competitiveness*, Cincinnati, Ohio.

Kwon, H. Y, Fitsum A., Menore T., Temesgen A. W. (2014). m-Government Framework Model for Ethiopian Environment. STIND-2014.

Lambert, R. A. (2001). Contracting theory and accounting. *Journal of Accounting and Economics*, 32(1), 3-87.

Langlois, R., and Foss, N. (1999). Capabilities and governance: The rebirth of production in the theory of economic organization. *KYLOS*, 52, 201-218.

Lee, A. S., and Baskerville, R. L. (2003). Generalizing generalizability in information systems research. *Information Systems Research*, 14(3), 221-243.

Ritchie, J., Lewis, J., Nicholls, C. M., and Ormston, R. (Eds.) (2013).Qualitative research practice: A guide for social science students and researchers. London: Sage publication.

Li, B. and Akintoye, A. (2003) An Overview of public-private partnership. In A. Akintoye, M. Beck and C. Hardcastle (Eds), *Public-Private Partnerships: Managing risks and opportunities*: 3-30. Blackwell: Oxford.

Bing, L., Akintoye, A., Edwards, P. J., and Hardcastle, C. (2005). The allocation of risk in PPP/PFI construction projects in the UK. *International Journal of Project Management*, 23(1), 25-35.

Loosemore, M. and Zou, P. (2005). Risk and opportunity management systems for property development and facility management companies. Paper presented at International Symposium on Advancement of Construction Management and Real Estate, Hangzhou, China, 1-2 November.

Lubatkin, M. H., Lane, P. J., Collin, S. O., and Very, P. (2005). Origins of corporate governance in the USA, Sweden and France. *Organization Studies*, 26(6), 867-888.

Mahaney, C. R. and Lederer, L. A. (2003). Information Systems Project Management: An Agency Theory Interpretation. *The Journal of Systems and Software*, 68, 1–9.

Marin, P. (2009). *Public-Private Partnerships for Urban Water Utilities*. Washington DC: The World Bank.

Markab Advisory (2012). Public Private Partnerships: A vehicle of excellence for the next wave of infrastructure development in the GCC. *Financial Center Authority*, 68. Qatar: Markab Advisory.

Marschollek, O., Beck, R., and Gregory, R. (2010). Psychological contract violation in it megaprojects in the context of Public Private Partnerships: The German tollcollect case. *ECIS 2010 Proceedings*. Paper 19.

Mason, J. (2002). *Qualitative researching* (2nd Edn.). London Sage: Publications.

Matthews, J., and Shulman, A. D. (2005). Competitive advantage in public-sector organizations: explaining the public good/sustainable competitive advantage paradox. *Journal of Business Research*, 58(2), 232-240.

McAdam, R. and Reid, R. (2000). A comparison of public and private sector perceptions and use of knowledge management. *Journal of European Industrial Training*, 24(6), 317-29.

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

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

Means, G. and Schneider, D. (2000). *Meta-capitalism: the e-business revolution and the design of 21st century companies and markets*. New York: John Wiley & Sons Inc.

Miles, M. B. and Huberman, A. M. (1984). *Qualitative data analysis: A sourcebook of new methods.* Newbury Park: Sage Publications.

Miles, M. B., and Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook. CA: Sage Publications.

Mingers, J. (2001). Combining IS research methods: Towards a pluralist methodology. *Information Systems Research*, 12(3), 240-259.

Miraftab F. (2004). Public-Private Partnerships: The Trojan horse of neoliberal development? *Journal Planning Education and Research*, 89-101.

MoFED (2011). The Federal Democratic Republic of Ethiopia Growth and Transformation Plan (GTP) [2010/11-2014/15]. Addis Ababa, Ethiopia.

Helmy, M. A., and Lindbergh, J. (2011). Investigating the Critical Success Factors for PPP projects in Kuwait. (Unpublished thesis). KTH Architecture and the Build Environment Department of Real Estate and Construction Management, Thesis No: 106.

Montanheiro, L. (2008). Public-Private Partnerships and their economic contribution. *International Journal of Applied Public-Private Partnerships*, 1(2), 1-18.

Montealegre, R. (1999). A case for more case study research in the implementation of information technology in less-developed countries. *Information Technology for Development*, 8, 199–207.

Myers, M. D. (1997). Qualitative research in information systems. *Management Information Systems Quarterly*, 21(2), 241-242.

Myers, M. D. (2009). *Qualitative research in business and management*. London: Sage publication

NASCIO (2006). Keys to collaboration: building effective public-private partnerships. The national association of state chief information officers (NASCIO). Corporate Leadership Council (CLC). Retrieved from http://natcapsolutions.org/LASER/LASER_Building-Effective-Public-Private-Partnerships.pdf on August 2016.

Nasir, M. H. N., and Sahibuddin, S. (2011). Critical success factors for software projects: A comparative study. *Scientific Research and Essays*, 6(10), pp. 2174-2186.

Nathan, K. V. S. K. (2002). Privatization of public assets in developing countries. Amicus Curiae, 44, 8-14.

Ng, A. and Loosemore, M. (2007). Risk allocation in the private provision of public infrastructure. *International Journal of Project Management*, 25(1), 66-76.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science*, 5(1), 14-37.

Ogbomo, M. O., and Ogbomo, E. F. (2008). *Importance of information and communication technologies (ICTs) in making a heathy information society: a case study of Ethiope east local government area of Delta State, Nigeria*. Library Philosophy and Practice (e-journal), Paper 219.

Ogunleye, O. S. (2010). *Context and capability: The future of small screen research and development in Africa*, presented at the M-government Consortium International Conference, Brighton, UK, 2010. Retrieved from http://researchspace.csir.co.za/ on September 2016.

Orlikowski, W. J. and Baroudi, J. J. (1991). Studying information systems in organizations: Research approaches and assumptions. *Information Systems Research*, 2(1), pp. 1-28.

Orlikowski, W. J. and Barley, S. R. (2001). Technology and institutions: What can research on information technology and research on organizations learn from each other? *MIS Quarterly* 25(2), 145-165.

Kohlbacher, F. (2005). The Use of Qualitative Content Analysis in Case Study Research. *Forum Qualitative: Qualitative Social Research*, 7(1), Art. 21. Retrieved from http://nbn-resolving.de/ on September 2016.

Osborne, S. P. (2000) Public–Private Partnerships: Theory and practice in international perspective. London: Routledge.

Pan, S. L., and Tan, B. (2011). Demystifying case research: A structured–pragmatic–situational (SPS) approach to conducting case studies. *Information and Organization*, 21(3), 161-176.

Parise, S. and Henderson, J. C. (2001). Knowledge resource exchange in strategic alliances. *IBM Systems Journal*, 40(4), 908-24.

Pass, C., Lowes, B. and Davies, L. (2000). Economics dictionary, 3rd ed., Glasgow: HarperCollins.

Patel, V. N. (1995). Application of soft systems methodology to the real world process of teaching and learning. *International Journal of Educational Management*. 9(1), 13-23.

Peffers K., Gengler C., and Tuunanen T. (2003). Extending Critical Success Factors methodology to facilitate broadly participative information systems planning. *Journal of Management Information Systems*, 20(1), 51-85.

Petersen, O. H. (2011). Multi-level governance of Public-Private Partnerships: An analysis of the Irish case. *Administrative Culture*, 12(2), 162-188.

Petter, S., DeLone, W., and McLean, R. (2012). The past, present, and future of "IS Success". *Journal of the Association for Information Systems*, 13, Special Issue, 341-362.

Phillips, N., and Hardy, C. (2002). *Understanding discourse analysis*. Thousand Oaks, CA: Sage.

Phillips, N., Lawrence, T. B., and Hardy, C. (2004). Discourse and institutions. *Academy Of Management Review*, 29(4), 635-652.

Phillips, N., Sewell, G., and Jaynes, S. (2008). *Applying critical discourse analysis in strategic management research. Organizational research methods*. (Online) Retrieved from www.researchgate.net/ on September 2016. DOI: 10.1177/1094428107310837

Piccoli, G. (2012). *Essentials of Information Systems for Managers.* USA: Wiley Publishing.

Pietroforte, R. and Miller, J. B. (2002). Procurement methods for US infrastructure: Historical perspectives and recent trends. Building Research and Information, 30(6), 425-434.

Pinto J., and Slevin D. (1987). Critical factors in successful project implementation. *IEEE Transactions on Engineering Management*, 34(1), 22-27.

Polidano, C. (2001). Why civil service reforms fail. *Public Management Review*, 3(3), 345-361.

Potter, J. (2008). Discourse analysis. In *The Sage Encyclopedia of Qualitative Research Methods*, M. Lisa, ed. Thousand Oaks, CA: Sage.

PwC (2011). *e-Government Strategy and Implementation Plan*. PricewaterhouseCoopers.

Rashed, M., Alam, M., Toriman, M. (2011). Considerable issues for sustainable public-private partnership project. *Scientia journals, Res Manageria*, 2(4), 57-65.

Rees, J., Mullins, D. and Boivard, T. (2012). *Third sector partnerships for public service delivery. An evidence review*. Third Sector research Centre. Working Paper 60. Birmingham: TSRC.

Reeves, E. (2003). Public–Private Partnerships in Ireland: Policy and practice. *Public Money and Management,* 23(3), 163–70.

Reijniers, J. (1994). Organization of Public-Private Partnership projects: The timely prevention of pitfalls. *International Journal of Project Management*, 12(3), 137-142.

Remenyi, D., Williams, B., Money, A. and Swartz, E. (1998). Doing research in business and management: An introduction to process and method. London: Sage Publications.

Richmond, B. (1994). Systems Dynamics-Systems Thinking: Let's Just Get On With It. In *International Systems Dynamics Conference*. Sterling, Scotland. Retrieved from www.ebspace.webring.com/ on July 2016.

Riege, A. and Lindsay, N. (2006).Knowledge management in the public sector: stakeholder partnerships in the public policy development. *Journal of Knowledge Management*, 10(3), 24–39. Retrieved from http://dx.doi.org/10.1108/13673270610670830 on June 2016.

Ring, P. S. and Van de Ven, A. H. (1992). Structuring cooperative relationships between organizations. *Strategic Management Journal*, 13(7), 483-498.

Roberts, Alistair (2002). Closing the window: Public service restructuring and the weakening of freedom of information law, Salem Papers. Retrieved from URL: http//www.inpuma.net on June 2015.

Robson, C., and McCartan, K. (2016). *Real world research*. John Wiley & Sons.

Rockart, J. F, (1982). The changing role of the information systems executive: A critical success factors perspective. *Sloan Management Review*, 24(1), 3-13.

Rosenau, P. V. (ed.) (2000). Public–Private Policy Partnerships. Cambridge, MA: MIT Press.

Rosenaue V. (1999). The strengths and weaknesses of Public-Private Policy Partnerships. *American Behavioral Scientist*, 10-34.

Rottman, J. W. (2008). Successful knowledge transfer within offshore supplier networks: A case study exploring social capital in strategic alliance. *Journal of Information Technology*, 23, 31-43.

Roumboutsos, A. (2010). A 'Ws' Contextual risk analysis framework: Mapping knowledge transfer potential between Road and Port Public-Private Partnerships. In *CIB World Congress*, The Lowry, Salford Quays, United Kingdom. Retrieved http://www.irbnet.de/ from on September 2016.

Sadka, E. (2007). Public-Private Partnerships: A public economics perspective. *CESifo Economic Studies*, 53(3), 466-490.

Sauer, C. (1993). *Why information systems fail: A case study approach*. Alfred Waller Publishers.

Sauer, C. (1999). Deciding the future for IS failures not the choice you might think. In Currie, W. and Galliers, B. (Eds.), *Rethinking Management Information Systems.* New York: Oxford University Press Inc.

Saunders, M., Lewis, P., and Thornhill, A. (2009). *Research methods for business students* 5th Edn. UK: Pearson Education Limited.

Savas, E. S. (2000). *Privatization and Public–Private Partnerships.* New York: Seven Bridges Press.

Schuppan, T. (2009). e-Government in developing countries: Experiences from sub-Saharan Africa. *Government Information Quarterly*, 26,118–127.

Selim, H. M. (2007). Critical success factors for e-learning acceptance: Confirmatory factor models. *Computers & Education*, 396-413.

Semere, L., Negash, W., and Asfaw, M. (2014). The Implementation of Training and Development Programs in Civil Service Institutions of Oromia National Regional State, Ethiopia. *Developing Country Studies*, 4(16), 72-78.

Senge, P. (1990). The *fifth discipline: The art and science of the learning organization*. New York: Currency Doubleday.

Senge, P. M. (2006). *The fifth discipline: The art and practice of the learning organization*. Broadway Business.

Seyoum, B. (2013). Designing future direction to promote e-Government and IT technology in public-services deliveries. A paper presented in KSP Seminar, KOICA, January 11, 2013.

Shapiro, S., (2005). Agency Theory. *Annual Review of Sociology*, 31(1), 263-284.

Sharma, A. (1997). Professional as agent: Knowledge asymmetry in agency exchange. *Academy of Management Review*, 22(3), 758-798.

Sharma, S. (2007). Exploring best practices in Public-Private Partnership (PPP) in e-Government through select Asian case studies. *The International Information & Library Review*, 39(3-4), 203-210.

Shenhar, A. J., Dvir, D., Levy, O., and Maltz, A. (2001). Project success: A multidimensional strategic concept. *Long Range Planning*, 34, 699-725.

Siggelkow, N. (2007). Persuasion with case studies. *Academy of Management Journal*, 50(1), 20-24.

Silver, M. S., Markus, M.L. and Beath, C. M. (1995). The Information Technology interaction model: A foundation for the MBA core course. *MIS Quarterly* 19(3), 361-390.

Simon, D. H., and Lieberman, M. B. (2010). Internal and external influences on adoption decisions in multi-unit firms: The moderating effect of experience. *Strategic Organization*, 8(2), 132-154.

Singleton, R. A. Jr. and Straits, B. C. (2005). *Approaches to social research* (4th Ed). Oxford University Press. New York: Oxford.

Skelcher, C. (2005). Public-Private Partnerships and hybridity. In E. Ferlie, L. F. Lynn and C. Pollit (Eds.), *The Oxford Handbook on Public Management* (pp. 347-370). Oxford: Oxford University Press.

Smith, S. R. and Lipsky, M. (1993). *Non-profits for hire: The welfare state in the age of contracting*. Cambridge, MA: Harvard University Press.

Smyth, H. and Edkins, A. (2007). Relationship management in the management of PFI/PPP projects in the UK. *International Journal of Project Management*, 25(3), 232-240.

Sousa, R. and Voss, C. (2006). Service Quality in Multichannel Services Employing Virtual Channels. *Journal of Service Research*, 8 (4), 356-371.

Spackman, M. (2002), Public-Private Partnerships: Lessons from the British approach. *Economic Systems*, 26, 283-301.

Spence, M. (1973). Job Market Signaling. *Quarterly Journal of Economics,* 87(3), 355–374.

Stiglitz, J. E. (1974). Incentives and risk sharing in sharecropping. *Review of Economic Studies*, 41(2), 219–255.

Stoneburner, G., Goguen, A., and Feringa, A. (2002). Risk management guide for information technology systems. NIST Special Publication, 800, 30.

Stowers, G. D. (2001). Commerce comes to government on the desktop: E-commerce applications in the public sector. *E-government*, 44-84.

Strauss, A., and Corbin, J. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage Publications.

Susanto, D. and Goodwin, D. (2010). Factors influencing citizen adoption of SMS-based e-Government services. *Electronic Journal of E-Government*, 8(1), 55-70.

Tefferi, K. (1994). Information Technology in Ethiopia. In *Information Technology in Selected Countries*, E. P. Drew, and F. G. Foster, (Eds.), The United Nations University, Tokyo, Japan.

Temesgen A. W., Menore T., Fitsum A., Kwon H. Y. (2014). Public-Private Partnership for m-Government: Adapting m-Service features to the public information services in Ethiopia. *STIND-2014*.

The Asia Foundation (2010). *Promoting Public-Private Partnership in Bangladesh*. Dhaka: Rainbow Enterprise.

Thomas, G. and Fernández, W. (2008). Success in IT projects: A matter of definition. *International Journal of Project Management*, 26 (7), 733-742.

Tomlinson, F. (2005). Idealistic and pragmatic versions of the discourse of partnership. *Organization Studies*, 26(8), 1169-1188.

Tosi, H. L., Katz, J. P., and Gomez-Mejia, L. R. (1997). Disaggregating the agency contract: The effects of monitoring, incentive alignment, and term in office on agent decision making. *Academy of Management Journal*, 40(3), 584-602.

Touray, A., Salminen, A., and Mursu, A. (2013). ICT barriers and critical success factors in developing countries. EJISDC, 56 (7), 1-17.

Trauth, E. M. (2001). The choice of qualitative methods in IS research. Q*ualitative Research in IS: Issues and Trends,* 1-19.

Ugwu, O. O. and Kumaraswamy, M. M. (2007). Critical success factors for construction ICT projects: Some empirical evidence and lessons for emerging economies. *ITCon*, 12, 231-249.

Uhm, O. (2010). Introduction of m-Government & IT convergence technology. *KAIST Institute for IT Convergence*, KAIST-2010.

UN (2014). *United Nations E-Government Surveys 2014: e-Government for the future we want*. UN: New York.

UNDESA (2008). World Population Prospects. United Nations. *Department of Economic and Social Affairs*. Retrieved from http://esa.un.org/ on June 2016.

UNECE (2008). *Guidebook on Promoting Good Governance in Public-Private Partnerships.* United Nations Economic Commission for Europe, United Nations, New York and Geneva.

UNPAN (2012). United Nations e-Government Survey-2012. *Department of Economic and Social Affairs*. New York: The United Nations.

Van Belle, J-P. (2009). An ICT maturity model and self-help resource toolkit for African NGOs. In P.A. Van Brakel (Ed.), *Proceedings of the 11th Annual Conference on World Wide Web Applications* (pp. 4-23). South Africa: Port Elizabeth, ISBN: 978-0-620-45215-1.

Van Herpen, G. W. E. B. (2002). Public Private Partnerships, the advantages and disadvantages examined. Publication of the Association for European Transport-2002. Retrieved https://trid.trb.org/ from on June 2016.

Volkoff, O., Strong, D. M., and Elmes, M. B. (2007). Technological embeddedness and organizational change. *Organization Science*, 18(5), 832-848.

Walden, E. A. (2005). Intellectual Property Rights and Cannibalization in Information Technology Outsourcing Contracts. *MIS Quarterly*, 29(4), 699 - 720.

Walsham, G. (1993). *Interpreting information systems in organizations*. Cambridge: John Wiley & Sons.

Walsham, G. (1995a). Interpretive Case Studies in IS Research: Nature and Method. *European Journal of Information Systems*, 4(2), 74-81.

Walsham G. (1995b). The Emergence of Interpretivism in IS Research. *Information Systems Research*, 6(4), 376-394.

Walsham, G. (2006). Doing interpretive research. Operational Research Society. *European Journal of Information Systems*, 15, 320–330. Retrieved from www.palgrave-journals.com/ejis on July 2016

Walsham, G., and Sahay, S. (2006). Research on information systems in developing countries: Current landscape and future prospects. *Information Technology for Development*, 12(1), 7-24.

Wang, S. and Liao, W. (2008). Assessing e-Government systems success: A validation of the DeLone and McLean model of information systems success. *Government Information Quarterly*, 25(4), 714-733.

Wang, Y. (2009). A Broken Fantasy of Public–Private Partnerships. *Public Administration Review*, 69(4), 779-782.

Waterman, R. W., and Meier, K. J. (1998). Principal-agent models: An expansion? *Journal of Public Administration Research and Theory*, 8(2), 173-202.

Wathne, H. W., and Heide, J. B. (2000). Opportunism in interfirm relationships: Forms, outcomes and solutions. *Journal of Marketing*, 64, 36–51.

Watson, R. T., Pitt, L. F., and Kavan, C. B. (1998). Measuring IS quality: Lessons from two longitudinal case studies. *MIS Quarterly*, 61-79.

Watson, R. T. (2013). Africa's contributions to Information Systems. *The African Journal of Information Systems*, Issue 4, 5(1).

Watson, R. T. (2014). A personal perspective on a conceptual foundation for information systems. *Journal of the Association for Information Systems*, 15(8), 514-535.

Weir, D., and Hutchings, K. (2005). Cultural embeddedness and contextual constraints: knowledge sharing in Chinese and Arab cultures. *Knowledge and Process management*, 12(2), 89-98.

Weseni, T. A., Watson, R. T., and Anteneh, S. (2015). A review of soft factors for adapting Public-Private Partnerships to deliver public information services in Ethiopia: A conceptual framework.In *IEEE Africon 2015, 1-6,* IEEE. DOI: 10.1109

West, D.M. (2005). *Digital government: Technology and public sector performance*. Princeton University Press, NJ: Princeton.

Wettenhall, R. (2001). Public and Private in the New Public Management (NPM) State: Some Australian reflections. *Public Administration and Policy*, 10(2), 111–47.

Whitson, T. L. and Davis, L. (2001). Best practices in Electronic Government: Comprehensive electronic information dissemination for science and technology. *Government Information Quarterly*, 18, 7−21.

Wiig, K.M. (2002). Knowledge management in public administration. *Journal of Knowledge Managemen*t, 6(3), 224-39.

Williamson, O. E. (1975). *Markets and hierarchies, analysis and antitrust implications: A study in the economics of internal organization*. New York: Free Press.

Williamson, O. E. (1985). The Economic institutions of capitalism: Firms, markets, relational contracting. New York: Free Press.

Wilson, B. (2001). *Soft systems methodology: conceptual model building and its contribution*. Chichester; New York: Wiley Publisher

Wolstenholme, E. F. (2003). Towards the definition and use of a core set of archetypal structures in system dynamics. *System Dynamics Review*, 19(1), 7-26.

Woodburn, I. (1991). The teaching of soft systems thinking. *Journal of Applied Systems Analysis*, 18, 29–37.

Wooffitt, R. (2005). *Conversation analysis and discourse analysis: A comparative and critical introduction*. London: Sage.

World Bank and AfDB (2012). The Transformational use of ICT in Africa. In E. Yonazi, T. Kelly, N. Halewood and C. Blackman (Eds.), *e-Transform Africa report*. Retrieved from www.eTransformAfrica.org/ on January 2016.

World Bank (2012). *Public-Private Partnerships: Reference Guide.* Version 1.0. The World Bank Institute and PPIAF.

Yeoh, W., and Koronios, A. (2010). Critical success factors for business intelligence systems. *Journal of computer information systems*, 50(3), 23-32.

Yescombe, E. R. (2011). *Public-private partnerships: principles of policy and finance*. Butterworth-Heinemann, Elsevier. Retrieved from http://www.yescombe.com on January 2016.

Yin, R. (1994). *Case study research: Design and methods* (2nd Ed.). Beverly Hills, CA: Sage Publishing.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd Ed.). Thousand Oaks, CA: Sage.

Yin, R. K. (2011). *Case study research: Design and methods*. New York: The Guilford Press.

Zefferer, T. and Teufl, P. (2011). Opportunities and forthcoming challenges of smartphone-based m-Government services. *European Journal of e-Practice*, 12. ISSN: 1988-625X

Zhang, X. (2005). Critical Success Factors for Public-Private Partnerships in infrastructure development. *Journal of Construction Engineering and Management*, 13 (1), 3-14.

Zou, X., Wang, S., and Fang, D. (2008). A life-cycle risk management framework for PPP infrastructure projects. *Journal Financial Management of Property and Construction*, 123-42.

Annexes

Appendix I

Interview guide for beneficiaries (end-users)

The purpose of this interview is for academic purposes only. In particular, I, the researcher, Temesgen Abera, who is a doctoral candidate at the Addis Ababa University's ITDP, currently, studying my Ph.D. research under a title of *Toward a Theory of IS Partnership Success* as a partial fulfillment for the requirements of my doctoral degree.

I want to confirm that your responses are going to be use for academic purposes and your identity will be kept confidential. Again, I want to confirm that the transcriptions of your responses are also translated into English. I hope you do understand my descriptions stated earlier and that you agree to be interviewed and understand that this interview is being recorded either by a tape recorder or a note, as per your interest and consent.

Do you agree to participate in my research?

If not: Thank you for your time and this concludes the interview.

If so, let us start…….

Discussion questions for Beneficiaries

- Are you one of the beneficiaries of the ongoing new electronic one-window-shop public service at the Lehulu's full-fledged integrated information systems? If yes, how long have you getting the new electronic public service from the Lehulu centers?
- Have you ever used the former (i.e., before the Lehulu initiative) manual public service from the public agencies? If yes, tell me your previous experience with the former public service delivery systems of the governmental agencies? And, how do you compare the differences between the former and the current public sector agencies' service delivery systems?
- Would you please compare the pros and cons of the old systems over the newly initiated unified electronic information systems?
- Do you remember any incident or heard a victim due to the newly initiated unified electronic public information systems?
- Before I conclude, would you like to add or raise any point regarding the ongoing new Lehulu systems?

Thank you and conclusion.

Appendix II

Interview guide for the private sector

The purpose of this interview is for academic purposes only. In particular, I, the researcher, Temesgen Abera, who is a doctoral candidate at the Addis Ababa University's ITDP, currently, studying my Ph.D. research under a title of *Toward a Theory of IS Partnership Success* as a partial fulfillment for the requirements of my doctoral degree.

I want to confirm that your responses are going to be use for academic purposes and your identity will be kept confidential. Again, I want to confirm that the transcriptions of your responses are also translated into English. I hope you do understand my descriptions stated earlier and that you agree to be interviewed and understand that this interview is being recorded either by a tape recorder or a note, as per your interest and consent.

Do you agree to participate in my research?

If not: Thank you for your time and this concludes the interview.

If so, let us start…….

Discussion questions for the agent's staff

- Prior to awarding the PPP project, what information did your private company had about PPP or ISP (e.g., financing a PPP project, managing a PPP initiative, knowledge management, and the overall PPP commitment and its operation etc.)?
- How much of that information about the PPP were your company ultimately able to secure and later implemented in the initiative?
- Do you think that your private firm was ready for the national PPP initiative?
- Do you think the nonexistence of the national PPP policy in the country impacted the PPP?
- From your experience, would you please explain the critical success factors of a PPP?
- Prior, during, and after awarding the national PPP project, did you (your company) obtain any information or support from the public sector directly or via a third party?

- Prior, during, and after awarding the national PPP project, what were the existing potential risks which were unseen by all stakeholders in the course of the Lehulu PPP early processes?
- Prior, during, and after awarding the national PPP project, were there any tendencies of interferences among partners in the partnership process? If yes, please explain?
- Do you think that the readiness of both sectors is mature enough at the moment for executing and entertaining the 'Transfer Phase' of the PPP initiative on time?
- Prior, during, and after awarding the national PPP project, what were the existing non-technical and technical potential problems exhibited under all phases (i.e., Build, Own, Operate, and Transfer) of the Lehulu PPP?
- Do you think an attention is given by the stakeholders on the necessity of knowledge sharing centers to facilitate the inevitable 'Transfer Phase' and constrain potential threats of gaps?
- Do you perceive the ongoing partnership as a success and the public information service that is created by the same partnership satisfactory as compared to the previous old systems?

- Before I conclude, would you like to add or raise any point?

Thank you and conclusion.

Appendix III

Interview guide for the public sector agencies

The purpose of this interview is for academic purposes only. In particular, I, the researcher, Temesgen Abera, who is a doctoral candidate at the Addis Ababa University's ITDP, currently, studying my Ph.D. research under a title of *Toward a Theory of IS Partnership Success* as a partial fulfillment for the requirements of my doctoral degree.

I want to confirm that your responses are going to be use for academic purposes and your identity will be kept confidential. Again, I want to confirm that the transcriptions of your responses are also translated into English. I hope you do understand my descriptions stated earlier and that you agree to be interviewed and understand that this interview is being recorded either by a tape recorder or a note, as per your interest and consent.

Do you agree to participate in my research?

If not: Thank you for your time and this concludes the interview.

If so, let us start…….

Discussion questions for the principals' staff

- Would you please compare the former status of infrastructural, organizational, and readiness of all public sector's systems while the PPP initiative was commenced in the country?
- Prior to awarding the PPP project, what information did you're the public sector had about PPP or ISP (e.g., financing a PPP project, managing a PPP initiative, knowledge management, and the overall PPP commitment and its operation etc.)?
- Do you think that the public sector agencies were ready for the national PPP initiative?
- Do you think the nonexistence of the national PPP policy in the country impacted the PPP?
- From your experience, would you please explain the critical success factors of a PPP?

- Prior, during, and after awarding the national PPP project, what were the existing potential risks which were unseen by all stakeholders in the course of the Lehulu PPP early processes?
- Prior, during, and after awarding the national PPP project, were there any tendencies of interferences among partners in the partnership process? If yes, please explain?
- Do you think that the readiness of both sectors is mature enough at the moment for executing and entertaining the 'Transfer Phase' of the PPP initiative on time?
- Prior, during, and after awarding the national PPP project, what were the existing non-technical and technical potential problems exhibited under all phases (i.e., Build, Own, Operate, and Transfer) of the Lehulu PPP?
- Do you think an attention is given by the stakeholders on the necessity of knowledge sharing centers to facilitate the inevitable 'Transfer Phase' and constrain potential threats of gaps?
- Do you perceive the ongoing partnership as a success and the public information service that is created by the same partnership satisfactory as compared to the previous old systems?

- Before I conclude, would you like to add or raise any point?

Thank you and conclusion.

Appendix IV

List of publications

Weseni, T. A., Watson, R. T., and Anteneh, S. (2015). A review of soft factors for adapting Public-Private Partnerships to deliver public information services in Ethiopia: A conceptual framework.In *IEEE Africon 2015, 1-6,* IEEE. DOI: 10.1109

Weseni, T. A., Watson, T. Richard, and Ho Yeol Kwon (2014). Addressing Public-Private Partnership Risks: The Case of Low-Income Countries PIS Delivery. ECIS 2014, Tel Aviv, Israel (*Accepted*).

Weseni, T. A., and Watson, R. T. (2014). A Conceptual framework for building a homegrown PPP platform to deliver PIS in developing economies. Journal of Global Knowledge Exchange Network, 1(1), 15-23.

Weseni, T. A., Watson, R. T., and Kwon, H. Y, (2013). Towards a better understanding of the role of developing economies governments in the implementation of PPP for improving the delivery of public services: A conceptual framework. In Proceeding of the 5th International Conference, Investment Trends in Africa and the Global Economic Recovery, University of Greenwich & ILI, December 12-13, pp. 136-148.