A Conceptual Framework for Building a Homegrown Public-Private Partnership Platform to Deliver Public Information Services in Developing Economies

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Abstract:

This is a work in progress research paper which proposes to investigate and exploit the possibilities and features of partnership efforts to promote the potential of creating a partnership between the public and private sectors of developing economies. Private firms in particular are now becoming more flexible organizations compared to that of public ones. It has now become a challenge for the public sector to achieve its public servicing goals without harnessing the possibilities of partnerships with the private firms. Creating such Public–Private Partnership (PPP) is also a complex phenomenon with many dimensions. Conceptually, PPP is a mode of implementing citizen services, based on the use of Information Communication Technologies (ICTs). Recognizing this fact, governments in developing economies are also investing a lot to achieve the delivery of public information services. Studies, however, indicate that most of these implemented initiatives have failed and there is a gap in Information Systems (IS) literature regarding the role of PPPs as a mechanism to assure proper delivery of public information services. This study, therefore, is aimed at investigating the possibilities and features of partnership efforts to promote the potential of cooperation between the public and private sectors of the developing economies to assure success of PPP initiatives. This study will employ a qualitative case study method which will be conducted in an Ethiopian PPP context incorporating a total of four active public and one active private stakeholder. Two potential theories namely Stakeholder Theory and Actor-Network Theory will be used as a guiding theoretical framework to conduct this research. The outcome of this research can be used by policy makers and practitioners as a tool to assess the role and success of PPP initiatives in developing economies.
**Keywords**: Information Systems, Public–Private Partnership, Developing Economies

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1. INTRODUCTION

How can academicians and practitioners accurately evaluate the role of partnerships for the success of Information Systems (IS) as well as for the delivery of public information services? Answering such multifaceted question is not that easy. Traditionally, the role of IS has been to design, build, and install systems to improve organizational performances but today IS needs to look beyond systems building (Watson et al., 1998). Following such strong comments, there have been limited amounts of IS studies attempting to define and theorize the success of public information services delivery and these efforts have been partly satisfactory or totally ignored the role of partnerships.

Public information services delivery literally refers to the use of technology, especially web-based applications 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, government employees, and other stakeholders (Whitson and Davis, 2001). It is a use of Information Communication Technology (ICT) as a tool to achieve better government (OECD, 2003) which subsequently 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). As the private sector is less concerned in equity and transparency than is the public sector (Rosenaue, 1999), partnership with the public would 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).

To cope with such gradual trends, nowadays governments are focusing on Public Private Partnerships (PPPs). Although, 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 government’s role of promoting sustainable economic development where government allows the participation of 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 gain among future generations (Rashed et. al., 2011).

In essence, 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 of the people involved with the project (NASCIO, 2006). There are three main reasons for adopting the 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 to relieve the administrative burden. Secondly, there is a wide spread belief that the private sector can provide better service to the public sector and establish a good public private partnership so that balance 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).

In conclusion, delivering services through PPP is utilized most in Europe and Asia, 56 and 53 per cent, respectively, however, significantly the lowest in Africa which is only 17 per cent (UNPAN, 2012). Unfortunately, the technology often is the “scapegoat” within an unsuccessful partnership (NASCIO, 2006). Beyond these reasons, in the case of PPPs, over the past three decades, governments in both developed and developing economies have embraced PPP 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).

2. PUBLIC PRIVATE PARTNERSHIP APPROACHES

In a broader terms, although Public–Private Partnerships (PPPs) can bring greater efficiency in the delivery of services, 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). PPP, in its 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).

Nowadays PPPs cover wide areas of cooperation and arrangement between governments and privates sectors, local communities and others stakeholders on the matter of dealing public information service deliveries. Gallegos (2012) identified various options of PPPs that allocate responsibilities and risk of operation between public and private sectors and other concerned stakeholders in the game to play properly the role while delivering the services. The report incorporates the following as main models: (i) BOT (build-operate-transfer), (ii) BOOT (build-own-operate-transfer) (iii) BOO (build-own-operate) (iv) BTO (build-transfer-operate) (v) LDO (lease-develop-operate) (vi) ROT (rehabilitate-operate-transfer) (vii) DBFO (design-build-finance-operate) (viii) IPO (Initial-Public-Offering), and others service contracts. ESCAP (2011), on the other hand, listed out the conventional criteria of classifying the approaches to PPP which include (i) ownership of capital assets; (ii) responsibility for investment; (iii) assumption of risks; (iv) duration of contract, etc. Taking these standards in to account, PPP models can be classified into five broad categories: (i) supply and management contracts, (ii) turnkey contracts, (iii) Lease, (iv) concessions, (v) private finance initiative and private ownership.
The major benefits of PPPs for the general public and its government are the delivery of instant, efficient and effective information services associated with private business practices to public service in order to ensure and satisfy citizens. In this regard, the involvement of the private sector in public services 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 under a PPP framework which in turn promotes efficient use of resources (Hussen, 2013). Due to these factors, PPP is increasingly being seen as an answer to several challenging problems that the public agencies in general face in serving their population effectively. This is especially true in developing economies, where generally the public agencies face resource constraints in improving their operations and delivering services to their needy citizens.

2.1 Partnership Challenges in Delivering Public Information Services in Ethiopia

Africans created the world’s first major information systems, gesturing and language (Watson, 2013). However, solutions to Africa’s delivery of information service challenges require the combined efforts of the private, public, and voluntary actors of various sectors. The question is, while this issue observed by many African countries, how best to combine those efforts continue to be a topic of ongoing debates.

Poverty reduction, improving civil service systems and transformation of public services are among the current hot issues of low-income countries. Ethiopia, one of the developing economies, is striving to fulfill the standards set under the United Nation’s Millennium Development Goals (MDG) and specifically its own five year Growth and Transformation Plan (GTP). In such a densely populated country with scarce resources and lack of knowhow, in order to address challenging issues related to quality of public service information systems, the Government of Ethiopia is currently giving due attention and concern by considering PPP strategies for its public services. The Ministry of Communication and Information Technology (MCIT) clearly recognizes the role of PPPs in delivering public information services by establishing relationships with the private sector ICT firms (PWC, 2011).

Channels of service delivery, in this regard, are the ways of communication through which a service is delivered to the citizen (Sousa and Voss, 2006). It is also the way by which a citizen requests a public service and receives the resultant output from a service (Harfouche and Kalika, 2009). Services as a series of interactions between the service provider and clients that result in an observable output (Janssen et al., 2009). As such, ICT is being viewed as a key tool to bring about a change in service delivery approaches (UNDESA, 2008). Among the potential values and efficient uses of ICTs is that to deliver improved services to citizens (Coleman, 2006). In this regard, the use of ICT would be 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). In this regard, developing economies, however, that couldn’t effectively manage their information resources mainly because of its public system failed to work
with private partners and fill the gaps of basic public information services as a result it would persist on that of conventional manual and poor civil service systems.

Following the gradually growing demand for the acceleration of infrastructural development and the improvement of service delivery in Ethiopia, considerations of PPPs as a model for public services development and information delivery is increasing. Although various underlying benefits of such arrangement have been enumerated and continue under the consideration of the Ethiopian government, there exists challenges in managing and selecting the right PPPs which manifest in a number of unobserved failure or success cases. In line with this, the primary possible barrier that could be identified therefore is the level of caution within the public sector as clearly argued by Gunnigan and Eaton (2008), there is political pressure to ensure that PPP projects do not compare unfavorably to the traditional projects and cost to the taxpayer will be a factor in political debates.

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 setup new Intuition at a Ministry level to lead the sector, as well as allocating sufficient resources for ICT development. Since the Ethiopian “e-Government Strategy and Implementation Plan” released in 2011, 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 a sustainable IS ecosystem (PWC, 2011).

As far as the existing Ethiopian public information service delivery is concerned, the presence and background of basic civil services in most parts of this country exist as manual and haphazard. Even if there is a growing recognition of the role of PPPs for the majority of Ethiopian public sector information services in general, the current progress and status of different agencies and utility service providers appears to be lacking proper experience and knowledge of initiating IS PPPs. Although the business climate of the country from the first glance looks like an attractive spot for investing and establishing partnerships however the readiness of the public sector for establishing partnerships with the private sector seems on a premature and underdeveloped level. Though some exemplar initiation of PPPs are ongoing such as the current new service called “Lehulu” which is a network of centers providing a Unified Billing System that allows one to pay all utility bills (Electricity, Water, and Landline phone) by merging the previous three public services’ payment into one-window, still poor qualities of services of IS are observable in many parts of the public sector of the country. Above all the telecom and other IT-related industries are found unquestionably in their infant stage of development for establishing partnerships due to known and unknown factors and thus calls for study which aims to promote the knowledge of such PPP activities in major critical sectors of the country and to come up with valuable outputs. In a nutshell, with all such PPP efforts the Ethiopian e-Services are still not as strong as expected. For example, according to the survey of e-government development index in year 2012 of the United Nations, Ethiopia is ranked at 172nd place (UNPAN, 2012). This is relatively low score even among some other African countries such as Uganda, Rwanda, and Malawi. Needless to say, keeping in mind the above challenges, the motivation of the researchers is regarded from the above stated points and the
following one multi-faceted question longing to be answered: what should be done in order to utilize PPP in delivery of information services in Ethiopia?

3. GUIDING THEORETICAL FRAMEWORKS FOR THE RESEARCH

Researchers have proposed different theoretical frameworks to understand the reasons for the failure of numerous public sector’s initiatives of electronic government developments especially the case of ICT initiatives of the developing economies. Although the role of PPPs initiatives for successful delivering of public information services is becoming one of the appreciated issues for many IS researchers, but there lack a comprehensive model in IS literatures that help to assess the issues comprehensively. This study, on the other hand, mainly utilizes the ‘Stakeholder Theory’ (ST) and Actor-Network Theory (ANT) to explore the features of PPP initiatives in delivering public information services’ success and challenges in the developing economies specifically in the context of Ethiopia. In general, from these two theoretical views one can potentially add paramount contributions to the study.

3.1 Stakeholder Theory

Various literatures on Stakeholder Theory and its analysis shows that several authors have attempted to identify as well as classify stakeholders and their role. Clarkson (1995) classifies them as the primary stakeholders, who are essential to survival and wellbeing of the organization, and the secondary stakeholders, with who an organization interacts, but the interactions are rather complementary than essential. Mitchell et al. (1997) also provide a comprehensive framework that explain how managers prioritize stakeholders’ relationships by identifying (i) stakeholders’ power to influence a firm, (ii) the legitimacy of the stakeholders’ relationships with a firm, and (iii) the urgency of the stakeholders’ claims on a firm.

Some authors also suggested that measuring the level of influence of stakeholders and the importance of their relationships by first identifying the stakeholders, then by categorizing them, and eventually connecting them with different types of arrays for example Carroll and Buchholtz (2003) applied the ‘STEP’ model with its four major contributing environments, i.e., social, technological, economic and political, to identify the stakeholders (their sub-elements) and their relationships and influences. Clulow (2005) also proposes a systematic discourse analysis that goes beyond the identification of key stakeholders, and different perspectives, including economy, sustainability and responsibilities, should be considered.

Bourne and Walker (2005) have provided a mapping tool to visualize stakeholders’ power, influence and contribution within the performing organization. Enserink et al. (2010) also suggest to follow a six-step stakeholders analysis (1) problem formulation, (2) inventory of the stakeholders involved, (3) development of a chart to illustrate stakeholders formal tasks, authorities, relations and current legislation, (4) determining the interests, objectives, and problems, (5) mapping out the
interdependencies between stakeholders, and eventually (6) determining the consequences of these findings with regard to the initial formulated problems.

Hummel et al. (2004) affirm that the use of methods supporting and managing the knowledge from involved stakeholders improves the processes of design of stakeholders’ model. Bergman et al. (2007) also emphasize the relevance of the organizational and political context surrounding design. Their model describes that significant improvements in systems design can be achieved by focusing on questions, (1) what system(s) can be built and delivered within the given environment, and (2) how to align stakeholders’ interests with the proposed designs to mobilize willingness and resources.

Generally, one can argue that these great contributions of Stakeholder Theory and analysis approaches are should be considered throughout the PPP projects in order to deliver public information services because as Bouwman et al. (2010) discussed that stakeholder analysis should not serve as a validation of the business/service concept. It rather should capture and evaluate the dynamic behavior and interests of stakeholders during the innovation/design project continuously, up till the final phases of the project.

![Figure 1: Stakeholders Involved in the Ethiopian PPP (spider-view) [Researcher’s Preliminary Investigation]](image)

### 3.2 Actor-Network Theory (ANT)

Actor-Network Theory (ANT) declares that the world is full of hybrid entities containing both human and non-human elements, and was developed to analyze situations where separation of these elements is difficult (Callon, 1997). ANT also examines the motivations and actions of actors who form elements, linked by associations, of heterogeneous networks of aligned interests (Walsham, 1995). To comprehend complex IS development processes ANT researchers do not take the social as given but instead follow the actors as they enroll into heterogeneous actor networks and thus assemble the social. By employing ANT many IS researchers provided robust accounts of the production and reproduction of actor networks in the development and implementation of IS thus enabling deeper understanding of their failure or success (see for e.g. Underwood, 1998; Walsham and Sahay, 2006). As Underwood (1998) explains:

Actornetwork theory helps us to understand the course of a project or enterprise. We can ask questions such as “How did it come to turn out this way?” (through the changing alliances of
actors), “Who is influencing it?” (who has been doing what scripting?) or “Why are some actors acting this way?” (what scripts are they carrying?). These are not questions with deterministic answers but they allow a rich interpretation of the situation.

As ANT has capability of providing insights into socio-technical settings where human and non-human agents interact, it is going to be used its concepts and contributions as a theoretical lens for this research with the objective of identifying main factors related to the participated actors that led to the PPP initiatives more localized success and by taking into account main information such as: the actors’ gains, efforts, and relationships.

![Diagram](image)

Figure 2: A Networking View of Actors in Ethiopian PPP [Researcher’s Preliminary Investigation]

### 4. RESEARCH DESIGN AND METHODOLOGY

The strategy selected for this research is an in-depth case study of a single PPP case in which this specific chosen case has exactly incorporated a total of four Ethiopian government firms and a single private firm. Given the interpretive stance adopted for this research and considering of the nature of its one multifaceted research question, a case study approach happens to be an appropriate research strategy for this study. Single case studies allow researchers to investigate phenomena in depth to provide rich description and understanding (Walsham, 1995). In fact, Yin (1994) has also endorses and explaining that a single case can often produce a more penetrating study.

Because of case study largely relies more on studying in-depth and its hallmark is the use of multiple data sources which enhances data credibility (Yin, 2003), we will focus on one actively operational PPP case which existed for the first time in Ethiopia under the category of CSCs (Common Service Centers) in the “e-Government Strategy and Implementation Plan” of the 2011 MCIT’s (Ministry of Communication & IT) plan. The plan clearly state that the government is starting to build up major public information service delivery channels with a collaboration of the private sectors using PPP strategies for specially selected critical services implementation of which the State is expected to facilitate the creation of sustainable IS ecosystem (PWC, 2011).

CSC type of PPP incorporates services like information dissemination, acceptance of public service requests and delivery of information services provided to the customers at a single point of public service delivery. CSC in general includes self-service kiosks, utility bill payment centers, ICT community centers etc. According to the MCIT’s plan, it is estimated that an investment of
approximately 2206.21 Million Birr would be needed over a period of five years for additional 800 CSCs to be set up in partnership with the private sector on a PPP business model which will cover all the Woredas by spreading down till Kebele level based on need and demands of different Regions of the country (PWC, 2011).

Specifically this research will focus on one of the CSC PPPs which initiated and already started providing its service to the general public of Ethiopia as single window based UBS (Unified Billing System) for utility payments. This PPP business model started operating for the first time in the country by integrating one local private firm namely Kifiya Financial PLC and four public stakeholders namely Ethio-Telecom, WSA (Water & Sewerage Authority), EPCo (Electric Power Corporation), and MCIT (Ministry of Communication & IT). This UBS is officially called “Lehulu” (Literally in English “For-All”) which started operating in 2013 by opening more than 33 operating branches in the capital and at the same time having a plan to commence shortly by expanding its services in four major cities of the country namely Mekele, Bahirdar, Hawassa, and Diredawa. Essentially, this PPP project has also planned to expand and establish in total up to 70 billing centers (for payment of power, telephone and water bills) in the country by fulfilling with all required IT Infrastructure (PWC, 2011).

There are several reasons for choosing this PPP case specifically. Firstly, although the Ethiopian economy is perceived to be one of the leading African emerging markets with double digit growth, the country’s major public information service delivery channels are however widely recognized as being seriously haphazard and underdeveloped. Secondly, public sectors such as MCIT nowadays are giving special attention to PPP business models and are starting to motivate the private firms to integrate and initiate to work with them (PWC, 2011). Thirdly, private IT firms such as Kifiya Financial PLC performing a tremendous amount of efforts and information-intensive activities to alter the well-aged poor delivery of public information service including UBS. Fourthly, the undelivered and neglected public information services touches on the daily lives of a broad section of developing economy’s citizens. These miserable people who are most dependent on the public sector’s services remain one of the biggest challenges for the public system itself. Thus the role of such PPP is going to be enormous. Last but not least, the researcher’s own personal involvement in such issues led him to observe and learn the role of PPPs’ contribution not only to the Ethiopian context but also to the overall development of public information service of the developing economies.

4.1 Research Approach, Data Collection Techniques, and Analysis

Qualitative research is more suitable for studies that are rich in detailed descriptions around context and processes (Kaplan and Maxwell, 1994). Accordingly, in order to answer the main multifaceted research question of this study, a qualitative approach will be employed to gather data from oral discourses. Moreover, qualitative research also used for studying selected issues, cases or events in depth and in details (Orodho and Kombo, 2002). This approach, in general, will expect to give greater scope to address the research issues and to ask questions such as ‘why’ and ‘how’ particular
trajectories are created. Furthermore, since the units of analysis are concepts, the aim is mainly to construct a theoretical explanation by specifying the conditions and processes in a phenomenon.

Both primary and secondary data will be collected in relation to delivery of public information service projects under a PPP alliance from four governmental stakeholders namely Ethio-Telecom, WSA (Water & Sewerage Authority), EPCo (Electric Power Corporation), and MCIT (Ministry of Communication & IT) and one local private firm namely Kifiya Financial PLC. This data will come from detailed interviews with the private and government officials involved in PPPs at different levels of decision making, project participants, service operators, and users of the services who are found in Addis Ababa City. Similarly, focus group discussion will be made with the beneficiaries of the public services about their experiences and perceptions towards the result of such partnerships. Specifically, interviews and participant observations will be serving as main sources of data. All in-depth interviews will be supplemented by document review such as using memoranda, organizational charts, project documentation, and related documents such as annual reports, manuals, minutes, and newsletters will be consulted. By considering the aforementioned sources, the researchers will thus be able to triangulate findings.

5. POTENTIAL CONTRIBUTION OF THE STUDY

PPP is mainly aimed at forming an alliance between actors and empowering the traditional and haphazard public services by improving its overall efficiency and effectiveness through the use of the privates sector’s expertise and technology into the public sector’s capacity building program. Extraordinary investments are made on PPP projects in spite of the limited financial resources and other constraints of the developing world including Ethiopia. It is, however, questionable why IS literatures or IS researchers neglect investigating such valuable PPPs initiatives regarding failure or success. This research is therefore aimed at developing a conceptual framework to assure of such PPP initiatives. The research, on one hand, aims to contribute to the theoretical domain of IS in general and PPP in particular by adding new insights into the literature by uncovering contributing factors of those PPP initiatives. All selected theories will be consulted in order to devise a comprehensive conceptual framework that can nurture PPP initiatives in developing economies in a better way. The outcome of this research can also be used as a spring-board for future theoretical deliberation by other researchers engaged in PPP researches.

The study is also aimed at developing practical implications for policy makers and practitioners who are engaged in assessing possibilities of PPPs, attracting partners, introduce PPPs, implement PPPs, manage PPPs, monitor PPPs as well as evaluate initiatives of PPPs in Ethiopian context. As PPP is considered as a driver and a major enabler for rapid development in a country, the output of this research can be used as important input to the policy makers and other concerned governmental bodies in their effort to make the existing public services more efficient and effective. It can also be used as valuable input to assess PPP initiatives and to devise the way how future PPP efforts as well as future public information services can be approached by practitioners.
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