HOW TO PREVENT POSSIBLE FAILURES OF PPP PROJECTS FOR INFRASTRUCTURE DEVELOPMENT IN CAMEROON: A FOCUS ON THE PRINCIPAL-AGENT PROBLEM?

By

BEKOLO EBOLO, Emmanuel

THESIS

Submitted to
KDI School of Public Policy and Management
in partial fulfillment of the requirements
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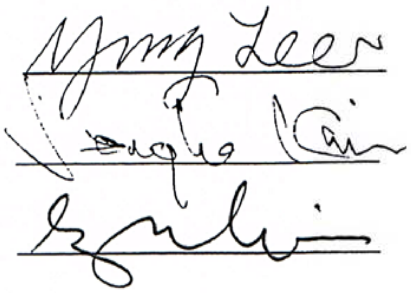

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ABSTRACT

HOW TO PREVENT POSSIBLE FAILURES OF PPP PROJECTS FOR INFRASTRUCTURE DEVELOPMENT IN CAMEROON: A FOCUS ON THE PRINCIPAL-AGENT PROBLEM?

By

Bekolo Ebolo Emmanuel

The principal-agent problem is critical in implementing PPP projects. It occurs almost everywhere all over the world. It takes place in the form of moral hazard and adverse selection, resulting in a tremendous amount of social costs, often borne by the society at large. For most of failed PPP projects examined, failures occur largely due to this so-called principal-agent problem.

This paper examines the possibilities and opportunities of preventing failure of PPP projects for infrastructure development in Cameroon, owing to the principal-agent problem.

The analysis of manifested principal-agent problems leads us to conclude that in order to effectively mitigate the risk of occurrence of the negative economic behavior favored by these principal-agent problems, there is a need to: set a strong and comprehensive legal and institutional framework, establish adequate and appropriate incentives for the private partner, and enhance monitoring strengths for the implementation period. Cameroonian government should take into consideration this risk management strategy so as to prevent possible failures of PPP projects.

DEDICATION

To my wife Seraphine Mireille BEKOLO and our children

Shekina, Shalom and Godbless.

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February 2013

Emmanuel BEKOLO EBOLO

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ABBREVIATIONS

BLT: Build – Lease - Transfer

BOO : Build – Own - Operate

BOT: Build – Operate – Transfer

BTO: Build – Transfer – Operate

CAMRAIL: Cameroon Rail Network Company

CDE: Camerounaise des Eaux (Water Resource Company of Cameroon)

DBOT: Design – Build – Operate – Transfer

DFBOM: Design – Finance – Build – Operate - Maintain

P-A: Principal Authority

PO: Private Operator

PPP: Public and Private Partherships

I. INTRODUCTION

In the political economy worldwide, the Public Private Partnership (PPP) Projects have been on the rise thanks notably to their possibility of bridging public sector's funding gap in infrastructure development. In line with this trend the Cameroon government is entertaining the development of PPPs so as to develop the nation's infrastructure projects. But the reality of PPPs in country experience suggests that not all PPPs have been a success. For any government that contemplates on PPPs it is imperative that they develop a risk management plan if they are not to fall into failures.

The analysis of the causes of these failures and disappointments has led to an abundant and rich literature from scholars, researchers, experts, governments, multilateral institutions. Of recurrent manner but also relevant, the following causes are prevalent: social, political, and legal risks; unfavorable economic and commercial conditions; inefficient public procurement frameworks; lack of mature financing engineering techniques; public sector related problems and private sector related problems (Zhang 2005; Akintoye et al 2003). For Klijn et al (2003), the inability to develop good partnerships lies in a combination of three factors: complexity of actor composition, institutional factors, and the strategic choices of public and private actors.

However, all these studies pay little attention to the relationship between project failure and the principal-agent problem. Yet, in this so-called principal-agent problem, many forms of potentially pernicious strategic behavior can pop up. For instance, morally hazardous strategic behavior emerges from information asymmetry between private and public parties, where the former acts as agent and the latter as principal. Thus, I believe that most failures occur due largely to economic behaviors morally hazardous inherent to the principal-agent relations. As the program is now only emerging in Cameroon and the first

PPP transactions are being prepared, it is important that the government takes into consideration the principal-agent risk behavior and invents a risk-management plan so as to avoid such failures. Prudence actually dictates that we be cognizant of these practical downsides and take them into consideration when we initiate a PPP. The risk is too great to ignore the negative economic behavior.

The purpose of this study is to contribute to a better understanding of how to manage PPP projects effectively in all countries, but particularly in Cameroon. In the following, I outline the reasons why the knowledge of principal-agent problems in PPPs is important and how some failures occur owing to principal-agent problem. Theoretical and practical framework for the principal-agent problems in PPP projects is then developed, using powerful examples as a way to provide practical insights into the underlying reasons of failures related to principal-agent dilemma. The examples cited draw in particular on the countries having already experienced such phenomenon. Taking advantage of these country experiences, the framework developed here is aimed at checking if currently Cameroon has a fully-fledged institutional environment to effectively apply PPPs. I also explore a risk management strategy for Cameroon policy makers so that they may prevent failures due to the principal-agent problem.

ISSUE BACKGROUND

According to the World Bank, an infrastructure project is a project that provides "one or more of the following services:

- Energy: natural gas transmission and distribution and/or electricity generation, transmission, and distribution.
- Telecommunications: fixed and mobile access and long distance service.
- Transport: airports, railways, seaports, and roads.

- Water: potable water treatment and distribution, and sewage collection and treatment".

The issue of developing infrastructure projects is one of the most important challenges facing Cameroon as a particular result of its economic and social development. In truth, infrastructure contributes to economy by providing amenities (quality of life) and increasing the economy. After describing the current state of Cameroon's national infrastructure (1) followed by the problem of the lack of public money to invest in these infrastructures (2), I will show why and how Cameroonian government has identified PPP as an alternative (3).

1.1 The current state of Cameroon's national infrastructure: an overview of transport infrastructure

Located in Central Africa, Cameroon is a low middle income country with a population of 20 millions habitants, an area of 475 447 km2 and a GDP per capita of $1,136. In their paper titled "Cameroon's Infrastructure: A Continental Perspective", Dominguez-Torres et al (2011) write that:

> *Cameroon is a key transit country for the landlocked countries of Central Africa". However, significant deficiencies in logistics performance prevent Cameroon from playing this role effectively. Transport costs along the main transit corridors to Chad and Central African Republic are among the highest in Sub-Saharan Africa and transport times are abnormally long. Inefficiencies are caused by poor performance and long dwelling times in the Douala port, excessive numbers of formal and illegal check points, poor road quality as well as governance issues in the management of transport services. Railway and port concessions have produced some improvement but investment needs in the sector remain huge. In the road sector, massive investments on the corridors Douala – Njamena and Douala – Bangui should help improve the*

current situation; however, the sustainability of these investments is not yet guaranteed due to the lack of an efficient road maintenance system.

This credible analysis superabundantly demonstrates the importance of the infrastructure challenges facing Cameroon.

In addition, should I mention that oil production is one of the main activities contributing to the recent growth of Cameroon's economy (African Economic Outlook 2012). In this regard, the government, for example, attributed 100 small-scale prospecting permits and Mobilong diamond mining permits to Cameron and Korea. These activities further explain the demand for transportation services. The map in figure 1 presents the Cameroon's transport infrastructure Network.

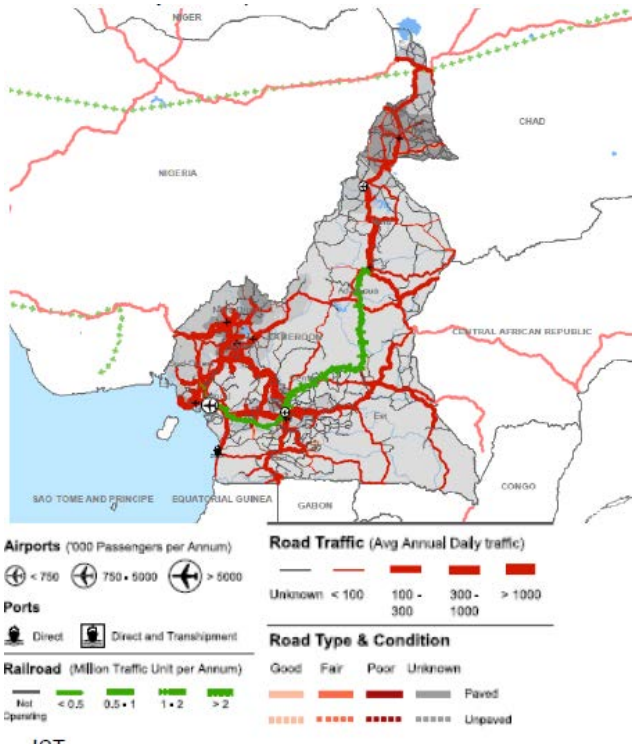

Figure 1: Cameroon's transport infrastructure network. Source: African Development Bank Group.

Infrastructure capacities do not allow Cameroon to properly provide even basic public services. Roads are in poor condition, of which only 10% of the network is built. The capacity of the railway network does not match the flows of export import cargo. Thus, the

report of the World Economic Forum on Africa 2011 ranks Cameroon 121 out of 139 countries, based on the quality of overall infrastructure. The overall of transportation suffers from inadequate maintenance and investment.

a) Road Transport

Cameroon's road infrastructure is weak with almost no paved roads. The total road network is 50,000 km of which only 5, 000 km are built. This road network does not provide adequate geographical coverage of Cameroon’s territory. Many of the roads are older than 15 years and are rapidly deteriorating. As a result, there is an urgent need for upgrading and maintaining the existing roads as well as for constructing new roads. The aim is to densify the internal network and link Cameroon to other countries of the sub-region so as to strengthen regional integration.

b) Rail Transport

With 1,104 km long and one Mt per year freight carried, the railway system of Cameroon plays an important role in the national economy. Some main export and import commodities of Cameroon and Chad such as petroleum and lumber, aluminum, cocoa, cotton, textile material, food and coffee are transported by Cameroonian rail before reaching the designated beneficiaries. Additional rail tracks are then needed to facilitate trade transactions within Cameroon as well as in the sub-region, and accordingly, to contribute to the national economic development.

c) Air Transport

Because of the poor state of the road network in Cameroon, the development of internal air travel and of small domestic airports has been encouraged. Thus, among 42 aerodromes that Cameroon has, there are only three international airports (at Yaoundé-Nsimalen, at Douala and at Garoua), ten have scheduled traffic, and five are major regional airports. Only ten airports have paved runways. Improving the current state of Cameroonian airport network is of big importance for the betterment of regional trade.

d) Sea Transport

In spite of its outlet to the sea and its role of enabling access to sea transactions to Chad, the Central African Republic, and a lesser extent the Republic of Congo, Cameroon still has only one deep sea port which is located at Douala. According to the World Bank, the port of Douala, which handles approximately six million metric tons of cargo per year, facilitates the shipment of goods to any part of Cameroon and neighboring landlocked countries. The economic crisis that hit Cameroon between 1985 and 1995 had a significant impact on the transport sector in Douala. It led to a reduction in the volume of public investment and expenditure on infrastructure maintenance, resulting in a significant deterioration of the network.

In order to take more advantage of its outlet to the sea, Cameroon has launched the project of construction of the Kribi deep sea port. This ongoing project is one the first PPP projects to be implemented in Cameroon under the existing legal framework for PPPs. A project of construction of another deep sea port is under study and will also be implemented through the PPP route.

1.2 The investment gap

The government makes serious efforts to increase the capital for the national infrastructure investment. However, there are still many challenges to face in this regard. Dominguez andTorres (2011) explain that:

> *Addressing Cameroon's infrastructure challenges will require sustained expenditure of $1,480 million per year over the next decade. More than two-thirds of the required spending ($1,095 million) is associated with capital investments, and the remaining third with operations and maintenance… The effort that Cameroon would need to meet its infrastructure needs is equivalent to 8.9 percent of its gross domestic product (GDP), significantly below the average for Sub-Saharan Africa (14.5 percent)… Cameroon already spends around $930 million per year on infrastructure, equivalent to 5.6 percent of its GDP…. A substantial funding gap of $350 million per year remains.*

Yet, as other developing countries facing with the same constraints, Cameroon fiscal resources are not sufficient to provide the requisite investment for economic and social development.

1.3 Why Public-Private Partnerships' contemplation in Cameroon?

This is a fundamental question, as it will demonstrate the importance for Cameroon government to be cognizant of all the issues pertaining to the implementation of PPPs.

a) The Need for Private Participation in Infrastructure Development in Cameroon

Due to the substantial capital investment that the construction of core infrastructure projects requires, the government finances and even donors resources are not sufficient for the needed funding. Like most developing countries and due to limited budget resources, Cameroon could not then afford to provide an adequate level of infrastructure likely to boost its economic growth. As a result, the quality and level of infrastructure in Cameroon are still relatively poor. In addition, government does not have the necessary skills to achieve such projects of a huge technical importance. Nonetheless, it has been shown that, if Cameroon could improve its infrastructure to the level of the middle-income countries of Africa, the growth effect could be on the order of 3.3 percentage points per capita (Dominguez-Torres 2011). Under these circumstances, Public-Private Partnerships can be an alternative that can help alleviate the fiscal pressure on the public sector, and therefore relieve government burden. Not only that, the partnership will create new economic activities for the private sector.

Also called “public-private cooperation”, the concept of PPP refers to contractual arrangements covering a long time period (typically more than 20 years) by which public authorities assign to private operators the fulfillment of a mission of public interest (De Palma et al 2009). It is indeed a system intended to attract private investments for the development of public infrastructure. Considering the increasing need to build infrastructure facilities as quickly as possible, the PPP route actually allows the private sector to design, build, finance and/or operate new and existing facilities so as to improve the delivery of services provided by the public sector.

The will to involve private sector in the management of some public services in Cameroon started in the mid 90’s. The country was still deeply hit by a financial and

economic crisis, and they talked a lot, often wrongly, about privatization[1]. Thus, through sectorial laws, private players have entered the public services of telephone, rail, electricity, water and industrial plantations: this is the case of MTN[2], ORANGE[3], CAMRAIL[4], AES SONEL[5], and CDE[6]. Such private sector involvement in public service delivery was actually the first generation of PPPs. Their main characteristic was that they were concluded on the basis of sectorial laws, without a general framework for PPPs, and negotiations were conducted following a case by case basis, sometimes according to the stakeholders in bargaining.

Since 2006, Cameroonian government established a general framework for the regime of PPPs: these are so-called second generation. They are designed to ensure a better risk sharing between the state and private partners. PPPs are then the fourth basic principle enshrined in the development strategy in the medium term of Cameroon (International Monetary Fund 2009). At the political level the current Head of State himself[7](The Spark 2013), in his inaugural speech of his ongoing term said: "…But you may ask me how to finance such a significant investment! It will primarily call for national and foreign private investors". Therefore as a solution to the shortage of infrastructure, Cameroonian authorities at all levels are promoting the use of PPP scheme.

b) PPP framework in Cameroon

As already mentioned above, Cameroon started to set up its PPP framework on December 29, 2006 with the enactment of Law n° 2006/012 laying down the rules and regulations governing partnership contracts system. Thereafter, other laws and enforcement

[1] In this case privatization means changing something from state to private ownership or control
[2] One of the two private companies operating in the area of telecommunication in Cameroon.
[3] The second private company operating in the area of telecommunication in Cameroon.
[4] Cameroon Rail network company.
[5] From AES Corporation.
[6] Camerounaise des eaux, i.e,. the government company
[7] That is Paul BIYA.

decrees that constitute the principal components of the legal framework for PPPs have been taken. The hierarchy of legal arrangements for PPPs is as follow:

- Law n° 2006 / 012 above mentioned;
- Law n° 2008/009 of the 16th July 2008 to lay down the fiscal, financial and accounting regime applicable to the partnership contracts;
- Decree n° 2008/035 of the 23rd January 2008 organizing and ruling the Sill Board for the implementation of Partnership contracts;
- Decree n° 2008/0115/PM of the 24th January 2008 specifying the enforcement clauses of Law n° 2006/012 of the 09th December 2006 fixing the general regulations of partnership contracts;
- Decree n°2012/148 of the 21st March modifying and filling in some provisions of Decree n° 2008/035 of the 23rd January 2008 organizing and ruling the Sill Board for the implementation of Partnership contracts.

The law n° 2006 /012 above mentioned define a partnership contract as: one whereby the State or one of its structures entrusts a third party, for a specified period depending on the duration of depreciation of investments or the chosen financing arrangements, with the responsibility of all or part of the following phases of an investment project :

- designing of structures or equipment for public service purpose,
- financing,
- constructing,
- transforming structures or equipment,
- servicing of maintenance,
- operating or managing.

One important particularity and innovation of the Cameroonian PPP scheme is that a partnership contract may also be signed between or among public entities. This provision is

given under article 2 (1) of the above mentioned law n° 2012/012 of December 29, 2012, which states that partnership contracts shall govern, within the context of extremely large-scale technical and financial projects, partnership relations between:

- Public corporation and one or more other public corporations
- Public corporation and one or more private corporations

That is such an innovation in the area of PPPs where the two main players all over the world generally are public entity and private operator. Let us only wait and see to what this Cameroonian innovation will end up in terms of contribution to the effectiveness of PPP route. However in this paper, I mostly focus on PPPs as partnership relations between public corporation and one or more private corporation(s).

The Cameroonian regime of Public-Private Partnership contracts is then general and governs all forms of collaboration between a public actor and another actor, public or private, for a project of public service in return of a fee based on investments. PPPs in Cameroon include all mounting possibilities: concession, BOT, DBOT, DFBOM, BOO, Leasing, etc.

The PPP framework also gives general directions and defines basic principles of introducing and implementing PPPs, the roles of the parties, procurement process and schemes, etc. In other words, the law defines:

- Power of the public and administrative authorities
- Basic roles of line ministries and public agencies
- Powers of the private sector
- General structure of preparation and approval procedure, etc.

According to the law, to be implemented through PPP route, the project must meet certain number of conditions, including:

- sustainability notice from the minister of finances;
- declaration of its eligibility;

- satisfaction to the prerequisite evaluation of PPP Unit;
- submission to call for competition;
- no-objection from PPP Unit

Figure 2 gives an insight of what Cameroonian structure of PPPs looks like.

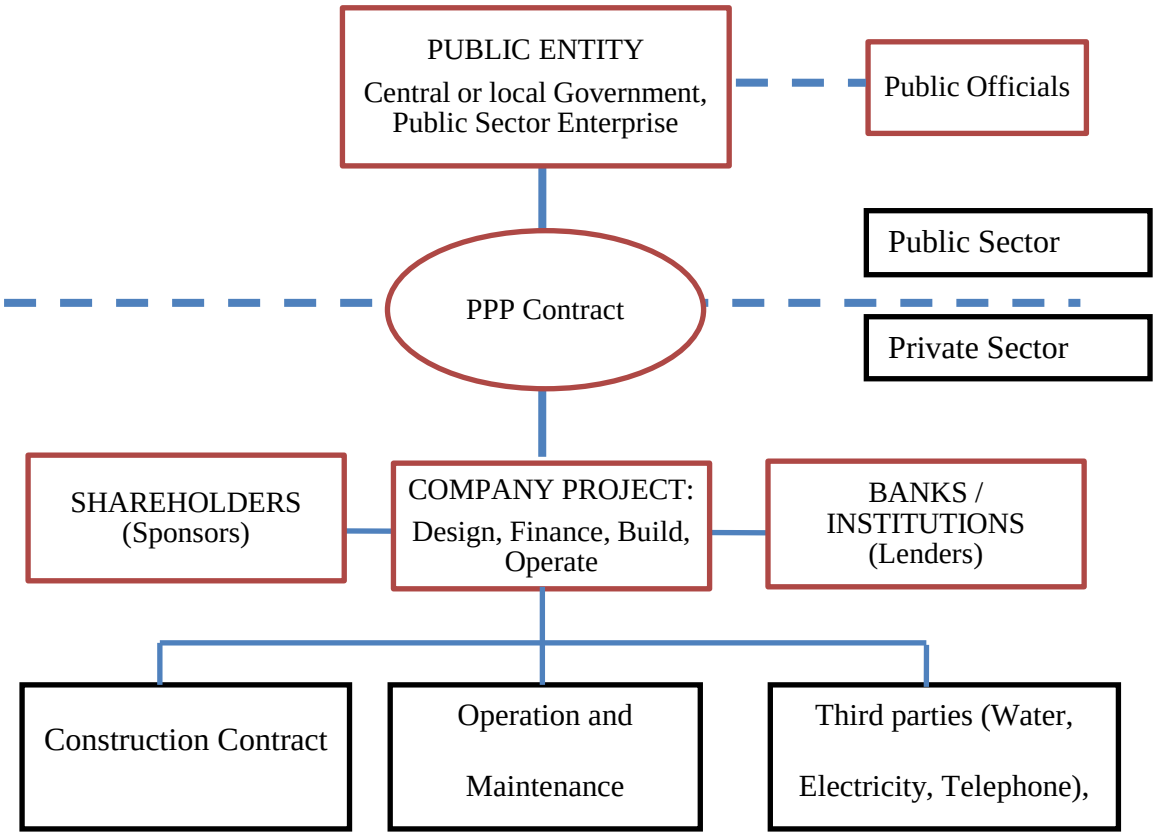

Figure 2. Model Structure of a PPP Contract in Cameroon. Source: Support Council for the Realization of Partnership Contracts in Cameroon.

Thus, the role of public managers aims at ensuring that through PPPs the citizen gets the best value added on funds invested throughout the project's life in comparison with the traditional public procurement.

As far as implementation of PPP projects is concerned, it should be noted that implementation occurs following three steps, i.e., project preparation, tendering process and project implementation (see figure 3).

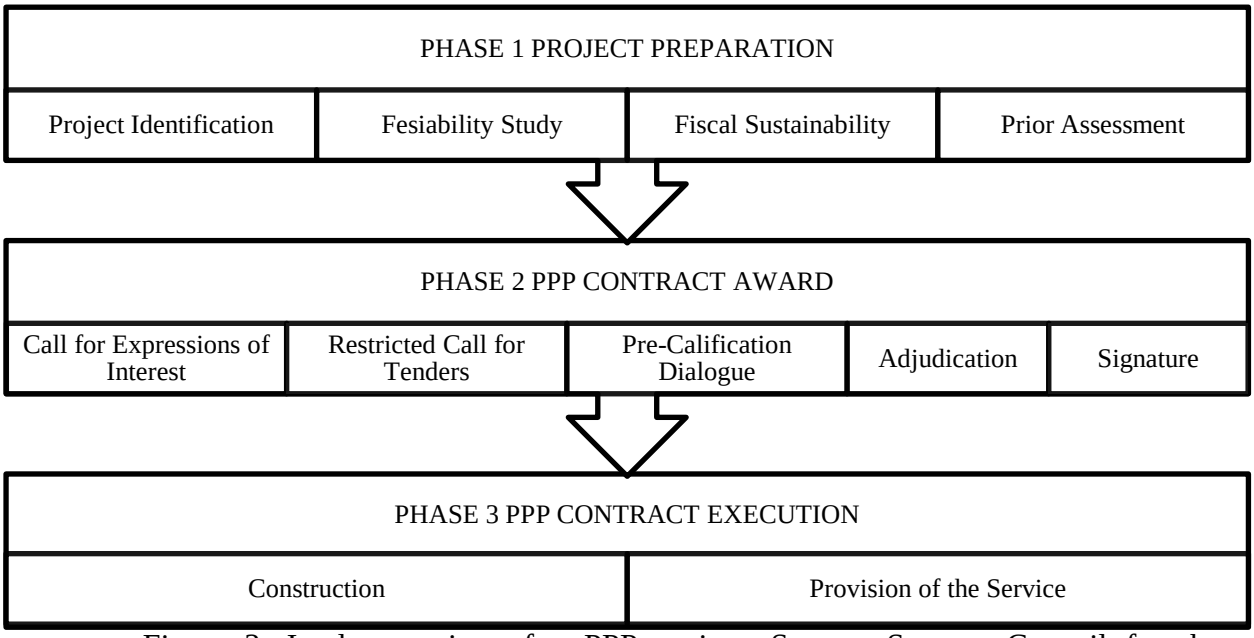

Figure 3. Implementation of a PPP project. Source: Support Council for the Realization of Partnership Contracts in Cameroon.

The roles and responsibilities of public stakeholders intervening in a PPP project are also well defined. In the project preparation stage, for example, there are three main actors that are: line ministries, Ministry of Finances and the PPP Unit. Figure 4 indicates those roles and responsibilities.

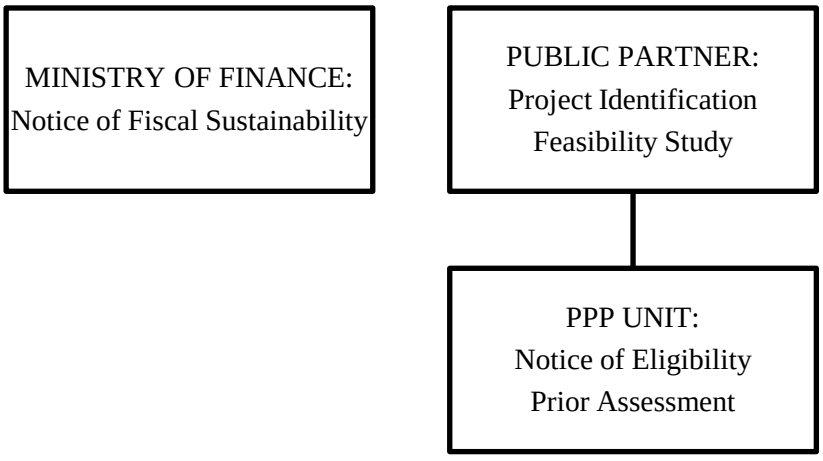

Figure 4. Role of Public Stakeholders in PPP project preparation. Source: Support Council for the Realization of Partnership Contracts in Cameroon.

The procurement of PPP projects in Cameroon can be divided into solicited projects and unsolicited projects, depending on who initiates the project. In the case of a solicited project, the public contractor (i.e., central or local government agency, public administrative establishment, public sector enterprise) identifies a potential PPP project and solicits proposals from the potential contracting partner. For an unsolicited project, the private operator identifies a potential PPP project and requests its designation as a PPP project from the competent authority. In this case, the private operator concerned can benefit from an advantage within the framework of public tender to competition for the selection of a contracting partner to the public entity.

A specialized agency of PPPs has been created and placed under the authority of the ministry in charge with economy. This agency, called, Support Council for the Realization of PPP Projects, has the mission of contributing, through its expertise, in creating or renewing public infrastructures and equipment, as well as improving the quality of the public service within the framework of bigger technical and financial projects to be achieved through a partnership agreement (see article 3 of Decree n° 2008/035 of the 23rd January 2008 above mentioned). Figure 5 reveals the organization chart of Cameroonian's PPP unit.

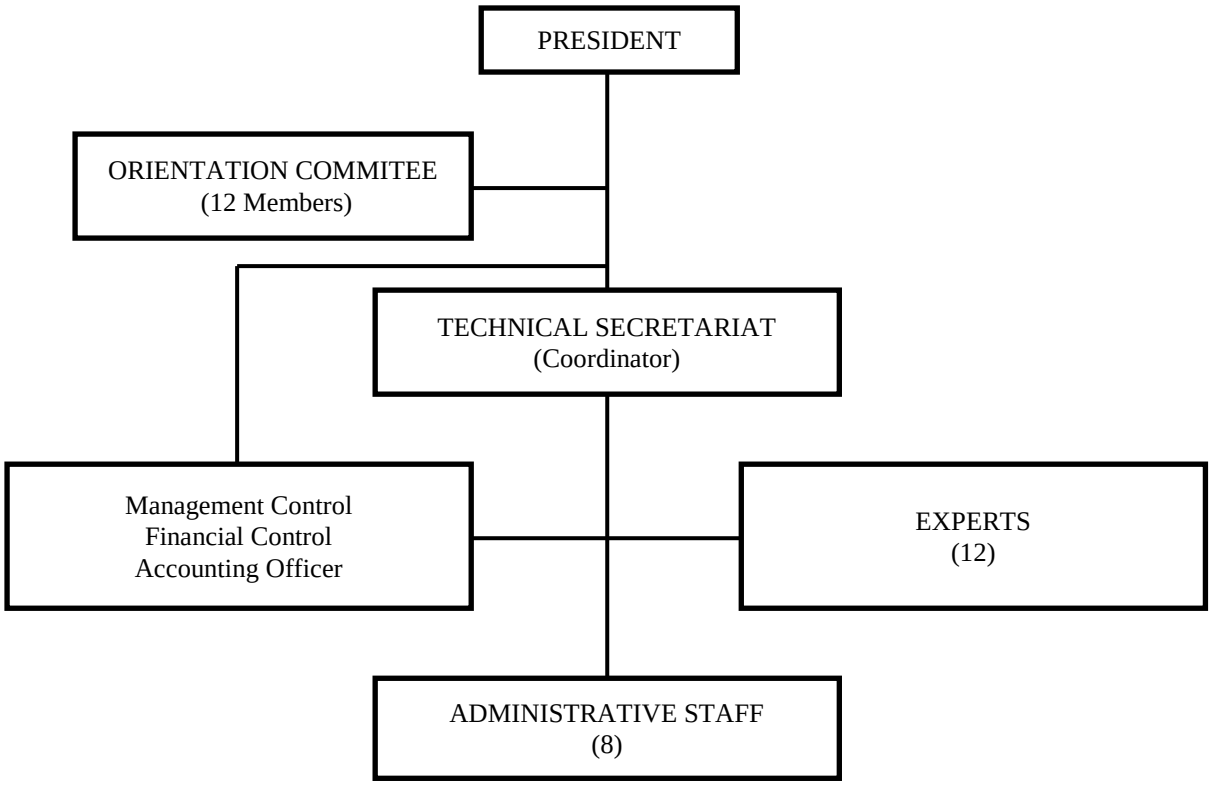

Figure 5. Organization Chart of the Support Council on PPPs. Source: Support Council for the Realization of Partnership Contracts in Cameroon

THEORY OF PRINCIPAL-AGENT RELATIONS

1.4 A general overview

Also known as agency dilemma, the principal-agent problem is a dominant theme in literature. The agency theory is a kind of relationship of a contract in which one person (the principal) engages another person (the agent) to take actions on behalf of the principal (Jensen 2003). One can merely note that the principal-agent problems generally refer to contractual relationships where the agent works on behalf of the principal and receives remuneration for his work, while the principal gives the powers and controls him, but not completely (Popovic et al 2012). A significant problem in the principal-agent relation is the nature of "moral hazard" committed by the agent. One main feature of this moral hazard is that the principal does not have sufficient knowledge or information of the agent's work, and is therefore exposed to morally hazardous strategic behavior on the part of the latter. Popovic et al (2012) explain the possibilities of occurrence of this strategic behavior by saying that due to incomplete and imperfect information possessed by the principal, the control is never perfect and the agent can work in his/her own selfish interests at the expense of the interests of principal. This is the consequence of the information asymmetry problem in which the agent takes advantage of its principal. The principal-agent problems can be illustrated as follow in the figure 6:

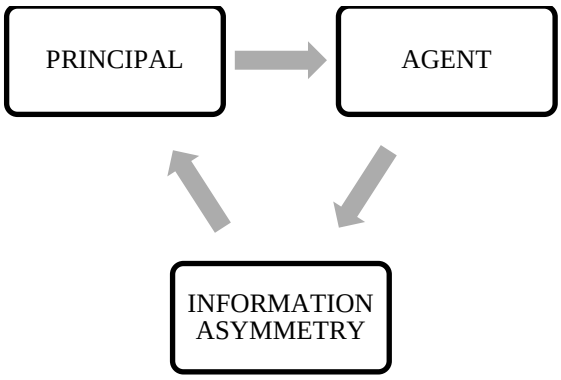

Figure 6: Principal-Agent Theory Framework

Generally, two issues arise from the asymmetric information; these are moral hazard and adverse selection. The former occurs when, after signing the contract, parties involved act opportunistically; but in the framework of the present paper, the opportunist action is on the side of the agent who may act in self-interest, because he knows that the principal cannot monitor him constantly or effectively. Popovic et al (2012) estimate that, specifically, the principal often does not know whether all parts of the contract with the agent are met, or whether the agent is properly motivated, so that the principal may offer a compensation that satisfies the agent. Then the agent engages in a morally hazardous behavior (e.g.: overestimation, misleading reports), in order to ensure himself a satisfactory value for the invested efforts. The latter issue, i.e. adverse selection, refers to the capacity of the agent to hide information, in particular about his ability, from the principal prior to signing a contract (Carlos 1992). For Heuvelhof et al (2008) adverse selection is an ex ante-contractual strategic behavior which usually takes place in the tendering process and leads the governments to select a contractor that is not optimal.

1.5 The Principal-Agent Problems in the Context of PPPs

As already shown above, the key assumptions underlying a P-A framework are the existence of information asymmetry between the parties, and the fact that the agent pursues its own self interest even if it is contrary to the one of the principal. These assumptions find an echo in the basic of a PPP contract, namely with the public authority acting as the principal and the private operator as the agent. Such a relationship between those parties is a principal-agent relation. Heuvelhof et al (2008) explain that "the agent will not always act in the best interests of the principal, and thus strategic behavior might emerge…Strategic behavior is characterized by reflexive, relational, time dependent, self-interested, ambiguous, and intentional conduct". Reflecting on the ways these characteristics are manifested in PPP projects, the same authors find that

> *Private operators mostly focus on their profit maximization; their selfish interests may harm public interests by delivering lower quality of service, reduced maintenance activities or higher service prices. Also, because of ambiguity, strategic conduct of private enterprises can often not be proven and they may therefore argue that their behavior in pursuing profit maximization either is not intentional or does not harm public values. In addition, during the drafting of the contract, both the public entity and private operator act while reflecting on mutual relations because they have to negotiate with each other on project details such as project quality standards, project costs, project output specifications, responsibility and risk allocation, financing structure. And project completion dates.*

Figure 7 sets indeed an interesting framework for PPPs and Principal-Agent framework that takes into consideration the conceptual model above described.

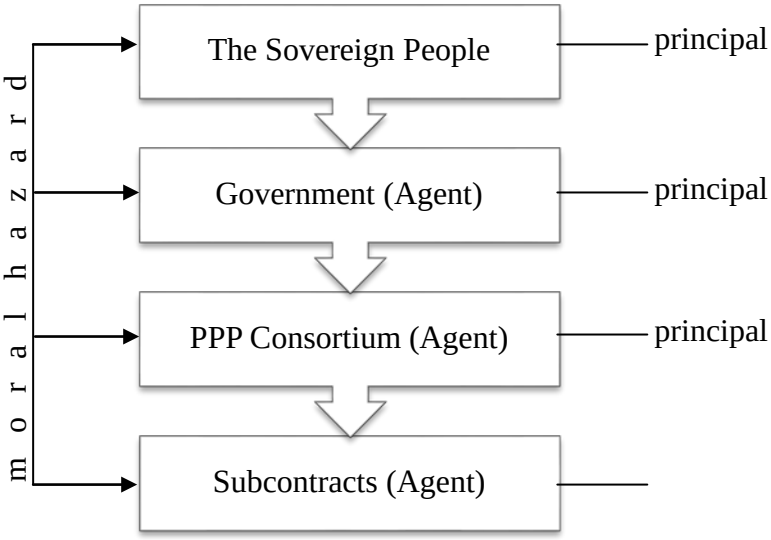

Figure 7: Framework of Principal-Agent Relation in PPPs.

With the exceptions of Hart et al (1996), Bentz et al (2001), Hart (2003), and Vickerman (2004), very few authors had linked PPPs and Principal-agent relation. These few authors only paid more attention to how to mitigate the likelihood of principal-agent relation in PPPs and they did not expand on the reasons of failed PPP projects due to the principal-agent problems, and that is yet the main object of this paper. Furthermore, in the context of PPPs, the principal-agent problems have the followings forms:

Collusion which intervenes when both public and private parties officials involved in the contract have private information on the sign of the externality (Leruth 2012).

Another form is corruption associated with the role of government as an agent for the general public. For example, some officials may receive bribes from the private party in order to give approval for a project being not in the public interest.

1.6 What is failure of a PPP project?

In general, failure can be defined as the state or condition of not meeting a desirable or intended objective. It may also be viewed as the opposite of success. In the context of this paper, failure is understood as the inability to meet the planned outputs in terms of project design, construction, timeframe, costs, quality, and performance.

It is worth to emphasize that failures referred to here are those with bad consequences for the users or beneficiaries of the assets in terms of either additional financial burden that they will be forced to face, or delay in the enjoyment of the asset. It goes without saying that this state of affairs also has negative repercussions on the process of the country's economic development.

MANIFESTED PRINCIPAL-AGENT PROBLEMS IN PUBLIC-PRIVATE PARTNERSHIPS FOR INFRASTRUCTURE DEVELOPMENT

As already mentioned above, my claim is that failure of PPP projects occurs largely owing to principal-agent problems. In fact, the potential risks of occurrence of the identified types of principal-agent problems actually exist due to hidden actions (that generates moral hazard) and hidden information (associated with adverse selection).

Regarding the adverse selection, the private operator possessing more exogenous information than the PA such as project's actual costs and its technological possibilities might extract a rent from its interaction with the PA even if the bargaining power of the private operator is poor. In the context of PPPs, the adverse selection takes place in tendering process and leads the PA to select a sub-optimal private operator.

Concerning moral hazard, it stems from the inability of the PA to directly monitor the actions taken by the private operator. Aware of such inability from the PA, the private

operator may have incentive to observe a strategic behavior. In the context of PPPs, moral hazard may occur during the stages of construction, operation and maintenance.

The combination of adverse selection and moral hazard leads to the following set of reasons that my hypothesis is true. From the analysis of some examples of failed PPP projects, one can observe that principal-agent problems frequently occur both on the part of the principal and on the part of the agent.

1.7 On the Part of the Principal

As a matter of fact, experience has shown that principal problems in the context of PPP projects do not only involve the PA (a) as the party awarding the contract to the private operator, but also imply the sovereign people who is represented by the government or the PA in general (b).

a) The Sovereign People as principal:

All over the world, it is an established rule that the PA usually act on the behalf of the Sovereign People, given that public officials use to draw their power from the will of the Sovereign People in order to serve the general interest. For instance, article 13 of the Declaration of the Rights of Man and the Citizen (Robespierre 1850) states that for the maintenance of the public force and for administrative expenses, a general tax is indispensable; it must be equally distributed among all citizens, in proportion to their ability to pay. In the framework of PPP projects, the Sovereign People is generally charged with the payment of fiscal burden attached to the construction, operation or maintenance of the asset. The money coming from the tax is then confided to public officials for the purpose of the achievement of community's welfare. That is why public officials are held accountable for their management, on the behalf of the general interest, of public money or goods.

In the context of PPPs, some public officials demonstrate incompetency and/or corruption skills in awarding projects against public interest. That negative behavior mostly

leads to project failure and is of consequence of unduly aggravating the fiscal burden of project beneficiaries. Such was the case in Motorway Project in Czech Republic (through bribery, lack of competition) and Szegedi Vizmu Water Partnership in Hungary (namely with institutional deficiencies). I will come back in details to those projects in the following.

b) Public authority as principal:

After explaining the figure of sovereign people as principal, I should nevertheless emphasize that the principal's role in PPP projects is more prevalent at the level of the PA. A look at some failed PPP projects shows indeed that:

In tendering process, public entity can be taken to select a wrong contractor, because of the practice of unfair or rigged bidding. Yet, this process which takes place before the award and signing of the contract is obviously the most important phase of projects under PPP framework, insofar as the selection of the optimal contractor has lots of chances to end up with satisfactory implementation of the contract. The existence of adverse selection can actually shine through collusion among bidders that will prevent the PA from having accurate information on those ones. That collusion arrangement can be centered on same high-level prices that bidders may offer. Since the PA does not know the real price and is unable to make comparisons among bids, he is likely to ultimately and unfortunately choose a bid with bloated cost estimates. Heuvelhof et al (2008) explain in this regard that collusion, another strategic behavior, could imply bids with prices substantially lower than the normal price in order to exclude other bidders who offer at a reasonable price from winning bid. On the other hand, the PA may fall into the trap of selecting a fallacious low-price bidder that will definitely ask for supplementary funding during the contract period. Furthermore, another scenario is bidders' collusion with each other in order to win the bid by turn even if the selected bidder is incapable to carry out the project. The winner is then determined among the bidders by themselves and competition is absent. "The government (PA) is kept from

selecting the optimal bidder and as a consequence moral hazard might occur in the construction process" (Qiao, 2008; Huang, 2007; Zu, 2005; Dang and Zu, 2006). Apart from bidder collusion, corruption may also take place in tendering in that some officials may disclose to collusive bidders the ceiling price determined by the PA. Taking account of what precedes; one can note that the likelihood of project failure is high in case of existence of adverse selection.

Moreover, principal's problems likely to lead to project failure also occur during the construction even if tendering is favorably organized. After signing the contract, there are potential risks of moral hazard. The contractor may still observe strategic behavior by displaying less effort in performing the tasks and using tactics inconsistent with the clauses defined in the contract. In theory, the PA should monitor and supervise the work he confides to the private operator. But given that the PA does not always have technical expertise or full information about the concerned task; the private operator may cheat for his own profit. The low quality of control, the underperformance and under reporting from the principal give room to the constructor who may overcharge cost of the construction; might use very cheap material, low-quality materials or fewer materials; might also lack technical know-how. As long as his work is not expected to be detected, contractor might even seek to earn excessive profits. Thereby, the project quality cannot be ensured in compliance with the quality specifications defined in the contract. And more and more expensive and difficult maintenance may be needed or required further down the road (Heuvelhof et al 2008).

In addition, principal's problems still appear in the operation and maintenance stage owing again to moral hazard deriving largely from information asymmetry. First, the private operator might observe a strategic behavior aiming at earning excessive profit from users through the extension of the charging period beyond what has been defined in the contract. For this purpose, he may claim that this phase of the contract should be extended because

some uncontrollable and unforeseen factors occurred and are likely to threaten seriously his profit. The result of this behavior would be the increase of transaction costs. Secondly and specifically in the context of road infrastructure, the private operator may also strategically increase the number of tollbooths in case it has not been determined in the contract. Reflecting on the PPPs expressway system in China, Heuvelhof et al (2008) write: "The China Audit Office (2008) further revealed the moral hazard problems during project operation and maintenance. It showed that the most serious problem in China is the increase in the number of tollbooths". Third, the private operator can reduce maintenance and accordingly, the asset can tend to deterioration. It follows from the above that moral hazard problem during operation and maintenance can lead to project failure due to the increase by the PO of transaction costs or the spending on maintenance less than normal.

Last but not least, principal's problems also show up through the existence of institutional inconsistency. Institutional inconsistency can actually provide space and opportunities for principal-agent problems that will ultimately lead to project failure. Regarding specifically tendering process, European International Contractors (2003) note that:

> *When tendering procedures and evaluation criteria are not clearly established …, corruption may emerge and potential bidders will be unprotected against arbitrary treatment and faced with higher transaction costs due to bribery expenses. It may also discourage potential bidders from submitting actual offers, possibly leading to adverse selection.*

Detailed examples of manifested principal's problems will be given below together with manifested agent's problems.

1.8 On the Part of the Agent:

Like in the case of principal's problems, experience has also shown that agent's problem can be two folded.

a) Public entity as agent:

This is a logical consequence of what I described above regarding the Sovereign People. In fact, when public entity or officials perform(s) negative or strategic behavior, they become selfish agent (s) toward the general public. For instance, if public officials receive bribes for the award of contract, or they get themselves involved in corruption scenario, they then cheat at the expense of general interest. Therefore, the examples above or below cited can also apply to the public entity as agent.

b) Private operator as agent:

In PPP projects, the PO is the most concerned with agent's problem since he is generally the party willing to cheat. His strategic and negative economic behavior has already been described above at the level of principal's problems equally in bidding process (through namely collusion arrangements – selection of bid with high level price or with lower price than the normal just to exclude other bidders offering normal price – etc.), construction stage (with overcharge construction cost - use of very cheap material - use of low-quality materials or fewer materials - lack of technical know-how - excessive profits – work strategically delayed - etc.), operation and maintenance (through extension of the charging period - increase of transaction costs - increase of the number of tollbooths – reduction of maintenance – spending less than normal - deterioration of the asset - excessive profits - etc.). As I will mention it further, many examples of failed PPP projects reveal the recurrence of the PO's cheating at the expense of the public entity.

1.9 Examples of Manifested Principal and Agent Problems in PPP Projects for Infrastructure Development:

In this sub-part, I extend the research by analyzing seven examples of failed PPP projects due largely to the principal - agent problems. Those examples are far from exhaustive. They are a combination of the different components of my conceptual model as

above developed. They are taken from experiences in many countries. The information is based on a range of sources, and the most important of these is the online PPP database of the Czech Republic[8]. They also draw on a range of compiled by papers or articles online.

a) Example 1: Motorway Project in the Czech Republic

In 2002, the consortium Housing & Construction Holding Co Ltd.(which changed its name to Shikun & Binui Ltd. in March 2009), Bauholding Strabag (the largest construction company in Austria and one of the largest construction companies in Europe based in Villach, with its headquarters in Vienna), Shiran, Kellog Brown and Root (an American engineering, construction and private military contracting company), signed a partnership contract with the government of Czech Republic for the construction of 80 km motorway as part of the Trans-European Network of motorways linking the Baltic with the Balkans, and aiming at connecting Ostrava on the Polish border with the existing motorway network at Lipnik and Becvou. The amount of this contract was $ 1.5 billion. The original agreement was a build, operate, and transfer (BOT) contract that provided shadow tolls to the private contractor. The government was supposed to pay a per vehicle fee to the private contractor. When the new administration came in, they were of the opinion that the original contract was unfair because it was negotiated without any other competitive bids. Thereby, they rescinded financing for the project.

This case revealed the influence of principal - agent problems on project failure, as indicated at the conceptual model. First, the contract has been awarded in a context of lack of competition in the tendering process. This lack of competition prevented indeed the public entity from selecting the right contractor, and therefore they were inevitably exposed to eventual strategic behavior of the private operator. Apart from that, some sources indicate that there might have been bribery associated with the government's decision to award the

[8] http://www.centrumppp.cz

contract to Housing and Construction Holdings. The government's Advisor (Irena 2002) even said that the project is costly and an untransparent deal: "A large project without a tender is an anomaly…These two factors, bad technical preparation and no tender, together with the strange behavior of Housing and Construction Holdings, do not help to solve the problems [of] D 47" (Source: PPP Centrum of the Czech Republic. Accessed December 11, 2013)

b) Example 2: Szegedi Vizmu Water Partnership in Hungary

In 1993, Générale des Eaux (an owner of 70 per cent by actions in Vivendi group) formed a partnership with the public water company Szegedi Vizmu. The daily operation of the company was then entrusted to the private company Générale des Eaux, and an annual fee was charged. The contract has been subject to an almost permanent process of renegotiation. The arrangement with the operation company was not open to tender. The pricing structure was criticized for allowing open-ended guarantees to the company. The management fee was criticized by some as being excessive.

This case shows that the project failed largely due to the lack of competition for the contract awarding; institutional deficiencies leading to an almost permanent process of renegotiation, and the high and excessive transaction costs of the project management due to the strategic behavior of the private party and the incompetency of public officials involved in the bargaining.

c) Example 3: Dabhol Power Project in India

In 1994, Bechtel, Enron signed a partnership contract with the Government of India for the development of a power facility in Dabhol. The total project cost was $2.9 billion. The government did not pay Enron to construct the plant. Instead, Enron secured project financing (almost all debt) from private Indian and U.S. banks, and government development banks. Lenders in India have been exposed to more than $1.3 billion in liabilities, while lenders in

the U.S. have been exposed to more than $640 million in liabilities. To date, the Dabhol project is the largest project in India ever to be outsourced to foreign private companies.

The project failed on many levels because once it was finally done, Enron charged the public two times the average rate of electricity than before the plant was built. A part from that, construction was far behind scheduled times. The main problems came in the wake of the Enron scandal of 2001. The project was mothballed and the plant is now sitting idle in India.

d) Example 4: Maple Ridge Downtown Development in Canada

In 2002, a partnership contract was signed between P3 International Trade and Investments; Voth Bros, both acting as a development private consortium, and the district of Maple Ridge, located at 45 km east of City of Vancouver with an area of 260 sq. km and a population of 73,000. The object of the contract was the development of some core facilities such as downtown office space, parking, arts center, etc., for a total capital cost of $ 50M, set at fixed price (see figure 8) .

Figure 8. The Project and some Core Facilities. Source: PPP Centrum of The Czech Republic

The project failed because risks (interest rate risk) were generally borne by the public entity. The contract has been awarded in a context of lack of bidders. This case revealed the presence of principal-agent problems both in tendering as well as in the execution of the contract

e) Example 5: Royal Dockyard sin United Kingdom (UK)

In 1997, a partnership contract has been signed between the UK Government (Ministry of Defense) and Devonport Management Limited and Babcock Rosyth Defense Limited for the sale dockyards used by the Navy to the above named private contractors. Another factor in the sales was the need to provide upgraded repair, refitting and refueling facilities for nuclear powered submarines, and the Department have contracted the new owners of the dockyards to manage the upgrade projects.

The project failed in that the lack competition in the bidding process provided opportunities to principal-agent problems. The government produced unreliable projections and accepted a selling price that was lower than the project's valuation.

f) Example 6: Manila Water Privatization in Philippines (United Nations Research Institute for Social Development 2005)

In 1997, the Philippine Government signed a concession contract with Manila Water Co Inc and Maynilad Water Services, Inc (private companies) for a privatized management of the Metropolitan Waterworks and Sewerage System (MWSS) aiming at reducing the cost of water, improving service, and expanding connections to waterless areas. Due to weak regulatory and oversight practices, the contract was amended and re-negotiated, and allowed the privatized water companies to increase rate and lower/postpone their performance targets.

The project failed due to revealed principal-agent problems both in tendering as well as in the execution phase. Investments and promised efficiencies did not materialize insofar as the private companies named above made unsustainable and unrealistic bids tariffs just to win the tender, and then changed the rules of the game to work in their favor. As a result, major performance targets were never met and the quality of service was low. Water prices have gone up to 76%. In addition, Maynilad filed a notice of termination of its water contract,

citing lack of support from MWSS and the government offered a compromise of concession fees of $264.15 million.

DISCUSSION

Strictly speaking, it is not obvious at all to deal separately with principal's problems and agent's problems especially in the framework of a two main parties' contract or relationship. However, in our paper we found that taking account of the great financial of fiscal role played by the Sovereign People for the development of infrastructure, this latter becomes the principal toward the public officials acting on the behalf of the general interest at stake. Still the principal mostly concerned in this paper is the PA insofar as they are those interacting with contractors.

The examples above cited show or confirm that the principal-agent problems are a determinant and important cause of failure of PPP projects. Failures occur owing to the incompetency of the principal (1) and the negative economic behavior of the agent (2). Cameroon government should be cognizant of those facts and eventually polish PPP framework by putting aside factors likely to allow principal-agent problems.

1.10 The Incompetency of the Principal as Cause of Projects Failure

From the experience of many countries as shown above, we see that the incompetency of the principal is one important cause of project failure. That incompetency is denoted through a couple of facts: the existence of institutional deficiency in the PPP framework, the lack of skills of public officials intervening in PPPs management. In practice, the incompetency starts showing up in the tender process through the selection of a sub-optimal contractor. Many examples indicate that most of the contracts awarded without competition or bidder lead to project failure. If it is so, it is precisely because the private operator is not chosen here as the highest bidder stemming from a fair competition.

After the award of the contract, i.e., during the construction, operation and maintenance phases, the incompetency of the principal pursues through the incapacity to well monitor and supervise the work done by the agent: A part from that, the principal abnormally and often exaggeratedly tolerates the non-respect of the initial agreement terms. Moreover, the public authority is unable to detect the bad behavior of his contractor.

1.11 The Negative Economic Behavior of the Agent as Cause of Projects Failure

Taking advantage of an existing information asymmetry, the private operator uses its information advantage to maximize its profit. Such a search of profit maximization unavoidably lead to project failure insofar as the transaction costs will be increased at the expense of the public entity, and in a large extent, to the taxpayer who will support a bigger financial burden. Likewise, the private contractor will use cheap and/or material in such a way that it will end up to the poor quality of the project.

In tendering, the selection of the wrong partner all too often is a consequence of strategic behavior among bidders. They make some collusion arrangements to win the contract each in turn and at a high cost, and even give some bribes to some officials to be awarded the contract. In a nutshell, the principal-agent problems in PPP projects start at the tendering process through the adverse selection associated with hidden information.

Projects failure also occurs after the award of the contract, i.e., during the construction, operation and maintenance phases. The failure here owns to strategic hidden actions of the contractor. The latter finds every way to earn maximum profit. In this regard, he increases the users' charges and may create shadow toll (notably in the context of PPPs for road construction). Most of the time, they don't respect the terms of initial agreement and convince the public authority on the "impossibility" to follow the letter and the spirit of this agreement.

1.12 Strengths and Weaknesses of Cameroonian PPP Framework Toward Projects Failure due to Principal-Agent Problem

a) Strengths of the Cameroonian PPP Framework for the Mitigation of Principal-Agent Problem

The government of Cameroon set up an ambitious program of PPPs for infrastructure development which will contribute to the improvement of the pace of its economic growth. Taking account of the various government endeavors of in the PPP sector, it is laudable that the government of Cameroon has successfully launched an enabling environment to facilitate private and public investment in infrastructure facilities and services. That enabling environment is characterized by a supporting legal and institutional framework

The law fixing the general partnership contracts system and the Enforcement Decrees, the principal components of the legal framework for PPPs, clearly define procurement types, procurement process, termination mechanism, conflict resolution, and the roles of the public and private parties, etc. Thus, the rules governing the selection of the contractor (see Chapter III of decree n° 2008/0115/PM of the 24th January 2008 specifying the enforcement clauses of Law n° 2006/012 of the 09th December 2006 fixing the general regulations of partnership contracts), if well applied, will definitely lead to the selection of the optimal contractor insofar as those rules define a set of clear and comprehensive requirements for the contract awarding. One interesting provision likely to prevent the agent from observing strategic behavior is definitely article 18 paragraph 1 of the Law n° 2006 / 012 above mentioned. That article states indeed that: the public corporation shall be authorized to take sanctions against the defaulting contracting party, without prejudice to legal proceedings against the latter, where it is established, after notification of the contract or at any time during its execution, that the partner willingly concealed or manipulated information that favored his selection;

and the partner fails to honor contract clauses. It has to be noted that such legal disposition might reduce the willingness of the contracting party to behave strategically. Other legal provisions are designed to fight against the collusion of public officials with bidders. For instance, article 41 of decree n° 2008/035 of the 23rd January 2008 organizing and ruling the Sill Board for the implementation of Partnership contracts states that each member of the contract partnership special commission is bound to professional secrecy for any information, facts, given to him in the course of his works; failure to this obligation constitutes misconduct likely to lead to a dismissal of the defaulter, without prejudice to any legal, disciplinary prosecution.

One important institutional arrangement likely to help preventing projects failure due to principal-agent problems is probably the support of the PPP specialized agency in the procurement process (such as assessment of feasibility for potential PPP projects, formulation of request for proposals, negotiation with potential contracting partner, evaluation of project proposals by private companies, designation of contracting partner, etc;) and in the control and monitoring of projects. That means that line ministries should benefit from the expertise of this agency and mitigate the risks of project failure owing to principal-agent problems.

b) Weaknesses of the Cameroonian PPP System with Respect to the Likelihood of Principal-Agent Problem

Weaknesses of the Cameroonian PPP system likely to lead to occurrence of principal-agent problems are mostly on institutional deficiencies. Here, it should be noted that there are not yet basic plans for PPP and implementation Guidelines. The award of projects without competition from other bidders may expose the government to criticism of the public, and, moreover to possibility of corruption.

However, it should be noted that article 3 of Decree n° 2008/0115/PM of the 24th January 2008 specifying the enforcement clauses of Law n° 2006/012 of the 09th December

2006 fixing the general regulations of partnership contracts, open a genuine room for the occurrence of principal-agent problems in PPP projects in Cameroon. In fact, paragraph one of this article clearly indicates that the partnership contract can only be concluded if the project evaluation carried out in view of its eligibility in the system of partnership contract shows, without prejudice other potential criteria, its complex nature and the emergency of realization. Such provisions deserve to be cancelled or to be re-written to ensure that the government nevertheless knows what he is expected to entirely do.

SUMMARY AND CONCLUSION

The government of Cameroon has started an ambitious program of public and private partnerships. Those partnerships cover sectors designed to support core infrastructure development in the nation, with an emphasis on mega projects which will contribute to rapid economic growth. Taking into consideration the various government endeavors of the past few years in the PPP sector, it is laudable that the government of Cameroon has successfully launched an enabling environment with a supporting legal and institutional framework to facilitate private investment in infrastructure facilities and services. Nevertheless, as the program is now only emerging and the first PPP transactions are being prepared, refinements and amendments that address any gaps in the framework need to be further developed.

A key issue is what risk management strategy is effective for mitigating principal-agent dilemma in PPPs? In other word, what should be done in order to reduce the numerous opportunities of the operator to behave strategically? It is not surprising at all that Cameroonian government should take an interest in principal- agent problems. The government, for example, should know that the emergence of strategic behavior is facilitated by the existence of institutional deficiencies and indicates that the institutional environment needs to be improved and adjusted. One should not think that motivations of contracting

partners to behave strategically derive solely from their strong desire to gain maximum profit, but also from regulatory imperfection.

When tendering procedures and evaluation criteria are based on subjective judgment or are not clearly established, corruption (nepotism; breaching confidentiality; or bribery) may emerge and potential optimal bidders will be unprotected against arbitrary treatment. Those potential bidders may thereby be discouraged from submitting actual bids, possibly leading to adverse selection (European International Contractors, 2003). Even if the right bidder is selected, during the operation process, corruption may occur because public officials who accept bribes from contracting partners may look the other way when service levels are irresponsibly low.

Another way to mitigate principal-agent problem is to restrict the interest incompatibility and goal divergence by establishing adequate and appropriate incentives for the agent in the contract and also by enhancing the monitoring strengths (although this can be costly) to limit the agent's aberrant activities

Another more way to mitigate principal-agent problem is the way the PPP is arranged, e.g., BOT, BTO, BOO, BLT, etc. For instance, the BOT is more likely to prevent the problem; wheras the reverse may be true with the BOO. However, more research work may be needed to identify and ascertain the one (s) that is (are) most preferred from the vantage point of avoiding the principal-agent problem.

In addition, people who are or will be involved in the PPP projects as principal representatives should be properly educated and trained for a better implementation of those projects in order to prevent the principal-agent problem. They should learn not only the intents of the relevant laws and regulations, but also the essential skills and analytical techniques required to implement the PPP projects.

Above all, principal-agent problem can’t be easily resolved unless Cameroonian society is sufficiently matured to the extent that values such as transparency and honesty are honored and redeemed in all transactions taking place between the public and private sectors. In other words, legal and institutional framework alone can’t guarantee proper operation of the PPP system. Those who administer the PPP system should not be incompetent and morally uncestible/-

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