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# Risk Management of Public-Private Partnership (PPP) Infrastructure Policy and Implementation: A Philippine Contractors Point of View

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## Abstract
Risk is a fundamental feature of any Public-Private Partnership (PPP) and it substantially influences the overall project cost. A detailed analysis is conducted by the project actors prior to deciding whether to embark on the project, and what type of PPP would be the most adequate vehicle for the project. The veracity and initiative of the consortium on determining the risks will either make or break the financial standing of the company.

This study focus on the determination of consolidating all the risks attributable to Philippine's Build Operate Transfer (BOT) through cursory review of implemented projects, structured interviews and distribution of questionnaires to various PPP players in the industry. The political risks with their corruption sub-risks rank as the most critical risk in Philippine BOT system as categorized by the country's key players. The inadequacies of the contractual provisions, the lack of transparency in procurement as well as the prevailing political instability attributed to delays in the project implementation are the major findings of this paper.

## Keywords
Public-Private-Partnership, Build Operate Transfer, Risk management, Tolled roads

## 1. Methodology

The methodology developed for this study includes the review of comprehensive international and local literature review, structured interviews and survey through questionnaires. In order to meet the objectives, 100 questionnaires were prepared. The original sample frame, on which the study sample is based, comes from a number of sources: (1) BOT Center selected key players, (2) Major tolled roads website, and (3) Government implementing agencies websites.

The key players are drawn from the government information sources. Cross checking through direct personal interviews allows verification of appropriate players. The selection of the population uses non-probability sampling wherein the elements in the population have no probabilities attached to their being chosen as sample subjects. It involves judgment sampling where relevant persons were gained access for requisite information. They alone possess the needed information and can give the information sought. (Cavana, R. *et al*., 2001).

Appropriate individuals (e.g., working in areas related to BOT since it revolved in the 1990's) were identified from out of 100 companies, which have relevant experience in BOT in the Philippines. Total population had not been verified by this researcher because no consolidated reports of all BOT projects in

all implementing agencies had been identified (e.g. complete lists of proponents and partners). Out of these 100 pre-selected individuals, 32 agreed to be interviewed. The interviews consisted of a lengthy qualitative discussion followed by a short quantitative component (questionnaire), in which respondents were asked to rate BOT risks and criticality indices. Interviews were done face-to-face.

Part 3 of the questionnaire requires the respondents to rank the risks in PPP projects using the interval scale. It helps in the computation of the means of the responses on the variables. In other words, the interval scale not only groups individuals according to certain categories and taps the order of these groups but also measures the magnitude of the difference in the preferences of the individuals.

The non-statistical analysis represents the key players of PPP scheme in the Philippines (1) Government, (2) Project Sponsors and Developers, (3) Independent Consultants/Designers/Planners, (4) Academe, and (5) Community groups (environmentalists, motorists & others). Gathering of data is a combination of personally administered, email and facsimile sent/retrieved questionnaires. The survey questionnaire was subjected to pre-testing through a content validity test conducted by the BOT Center under the country's Department of Trade and Industry (DTI) of the Philippines.

## 2. Result and Discussion

The local survey was conducted from April 16 to May 22, 2007. One Hundred (100) questionnaires were sent to Philippine BOT players that covered PPP actors with relevant positions and are at top management level in their companies. The detailed respondent's particulars are shown in Table 1. A total of 52 valid questionnaires were received which accounts for a response rate of 52.00 percent.

**Table 1: Respondents' Particulars in Survey Questionnaires**

| Respondents' Particulars | Number of respondents | Percent (%) of respondents |
|---|---|---|
| By respondents' sector | | |
| Public | 34 | 65.38 |
| Private | 18 | 34.62 |
| By respondents' industry | | |
| Power | 7 | 13.46 |
| Transport (Road) | 21 | 40.38 |
| Transport (Rail) | 4 | 7.70 |
| Transport (Airport & Port) | 7 | 13.46 |
| Water Resources | 6 | 11.54 |
| Telecommunication | 1 | 1.92 |
| Others | | 11.54 |
| Lending Institution | 4 | |
| Media Practitioner | 1 | |
| University Professor | 1 | |
| By respondents' company category | | |
| Implementing Agency | 35 | 67.31 |
| Main Contractor/Operator | 9 | 17.31 |

| | | |
|---|---|---|
| Consultant (Independent/Design/Supervision) | 6 | 11.54 |
| Others | 2 | 3.85 |
| By respondents' designation | | |
| President/CEO/General Manager | 6 | 11.54 |
| Administrator/Department Secretary | 1 | 1.92 |
| Vice Presidents/Asst. Secretary/Deputy GM | 2 | 3.85 |
| Project Directors | 2 | 3.85 |
| Project Managers | 5 | 9.62 |
| Division Heads/ Department Heads | 7 | 13.46 |
| Senior Construction/Contract Managers | 25 | 48.08 |
| Reporter | 1 | 1.92 |
| University Professor | 1 | 1.92 |
| Total | 52 | |

## 2.1 Unique Risks Attributable to Philippine PPP System

### 2.1.1 Political risks

Political risks as defined by the Applied Research Project for the Evaluation of Risks in BOT projects by Wang, S.Q. *et al*., (1999) describe the risk of government actions that may endanger a project.

*a. Change in law risks*

Change in law risk includes changes in government policies with respect to laws and regulations, methods to address inflation, currency conversion, rates and methods of taxation, or the method by which electricity tariffs are set and approved (Wang, S.Q. *et al*., 1999).

The Philippine government through its implementing agency for various public works such as the Department of Public Works and Highways (DPWH) has utmost authority to issue Department Orders from changes imposed on the department's implemented projects ranging from technical specifications of the project through amendments on the payment schemes. The orders are usually implemented upon the approval of the highest authority who is DPWH's Secretary, superseding the projects contract provisions of the project even after the Contract Agreement (CA) has been signed. It includes modifications, amendments, or reinterpretations of the existing laws after the signing of the CA.

*b. Corruption risks*

Corruption means using political, legal or regulatory leverage to extract additional costs which no one will ever admit and which the project can never recoup. It is practice of government officials or their representatives of soliciting or receiving an unlawful consideration or commission or exerting or utilizing any unlawful influence in connection with the awarding of the agreement to the project developer (Wang, S.Q. *et al*., 1999). Corruption is considered as a common practice in developing countries. This explains why the project is spending additional money in order to gain favors such as faster transaction, easier negotiation and smoother project coordination. Additionally, one single approval of government permits will require more than one person for clearance and validation. In the case of China is similar to the Philippines where money is spent to curry favors from corrupt officials at the risk of urging a government agency to refuse the project developer and the project. Since the Philippines, according to the 2007 survey is the "most corrupt nation in South East Asia", the government has declared various activities in order to combat corruption and remove negative criticism.

*c. Expropriation risks*

In S. Tillman's research on the attempt to quantify qualitative information risks (QQIR) in structured finance transactions, expropriation risks are defined as any legislative or administrative action from the host government, which has the effect of depriving the investor of his/her ownership or control or of his/her substantial benefit from his/her investment, with the exception of non-discriminatory measures of general application. Wang, S.Q. *et al*., (1999) clearly and simply states is as the risk that the government expropriates the project without giving reasonable compensation to the project developer and investor, etc. The expropriation can take the form of nationalization of the facility wholesale (rare) or "creeping" expropriation whereby the government changes regulations, taxes, tariffs after a project is complete to gradually take over the facility and its operating profits (common).

*d. Foreign exchange & currency convertibility risks*

Claims and payments will be converted to other currencies to meet foreign currency obligations from suppliers primarily US Dollars, Japanese Yen and Euro. This risk also includes financial closing risk, dispatch constraint risk that is subject to government schedule and timing for the schedule of construction and operation and tariff adjustment risk (utilization or applicability of governing tariff formula). The prices BOT proponents are most concerned with are local and foreign interest rates, foreign exchange rates, the foreign exchange rate, and inflation. Lenders and equity investors will normally insist on some mechanism to protect them against this risk (BOT Center and USAID, 1995).

Moreover, an important issue for import substitution projects is how the project company protects itself from exchange rate depreciation, if it had a high amount of foreign debt. This issue remains for creditors even if the project has been able to secure flexibility in pricing its sales or is financing the project with a relatively high proportion of equity. Commercial term loans in the Philippine market are generally short (5 to 7 years) to match the cash throw-off profile of road projects. The bond market is inchoate. Hence, a few projects that got implemented relied on foreign funding to get longer repayment periods as well as take advantage of low interest rates. That, in turn, meant foreign exchange risks especially since toll ways do not have foreign exchange revenues (DPWH and JICA, 2003).

*e. Delay in approval risks*

Delay in approval risks means that the central office of local government authority does not approve the project-related issues in time or even cancels the ones already approved (Wang, *et al*., 1999). The delay is usually attributed on the approval of variation orders or any matters that relate additional costs to the proponent. The approval of any permits, payments and variation orders will require complex and complicated differing government agencies. Even under the same auspice of the department, a section thereof can create a long list of additional documents/papers that the proponent must submit prior to approval. It usually requires more than five persons to check and verify prior to approval, thus, a delay contributed by one person can affect the chain of the government's complicated web of agencies.

*f. Political instability*

The frequent changes of government official or head of a procuring entity institutes changes in inter office procedures that may affect the approval and payment schedule. Officials of the government's central agency are subject to a separate body scrutiny but it is the President's anointed official who gets to the helm. And this holds through to personnel in the department on whom the newly appointed head shall entrust key positions. The Philippines with its political environment that is affected by recent impeachment cases tends to change various officials and this will entail disruption in the department system. Take for instance, the National Irrigation Administration (NIA) Office under the Department of Agriculture mandated to implement water resources projects. It had a change of Administrator four times 2005 to date. Imagine the effect it has contributed to a project that usually lasts three to four years project implementation, that is, aside from the planning duration until the end of the concession period.

**Table 2: Ranking of Political Sub-Risks of PPP in the Philippines**

| Political risks | % of respondents | | | | | | Mean Score | Ranking |
|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | | |
| Change in law risks | 11.54 | 23.08 | 15.38 | 17.31 | 13.46 | 19.23 | 2.46 | 4 |
| Corruption risks | 42.31 | 17.31 | 15.38 | 9.62 | 11.54 | 3.85 | 1.77 | 1 |
| Expropriation risks | 9.62 | 5.77 | 13.46 | 23.08 | 23.08 | 25.00 | 3.02 | 6 |
| Foreign exchange & currency convertibility risks | 2.00 | 12.00 | 18.00 | 26.00 | 14.00 | 28.00 | 2.50 | 5 |
| Delay in approval risks | 7.69 | 25.00 | 21.15 | 21.15 | 19.23 | 5.77 | 2.38 | 3 |
| Political instability | 26.92 | 17.31 | 25.00 | 13.46 | 9.62 | 7.69 | 1.92 | 2 |

As shown in Table 2 corruption risks topped the most critical sub risk of political nature. This survey reflects the assessment conducted in January and in February by the Political and Economic Risk Consultancy, based in Hong Kong ranking Philippines as the most perceived corrupt nation in East Asia. (Conde, 2007) and subsequently validated by the World Economic Forum and Makati Business Club Research stating that corruption remains the most problematic factor in doing business in the Philippines. (Lucas, D., 2007). Political instability follows thereafter. Four of the sub-risks are critical as their mean scores are close to three. Foreign exchange and currency convertibility risks rank fifth and only two respondents voted as very critical. It is adjudged in the World Economic Forum as the least problematic factor for doing business in the country (Lucas, 2007).

### 2.1.2 Design and construction risk

*a. Improper design*

Improper design risks include the inapplicability of the design of structures and other appurtenant facilities therewith as set forth with the plan as compared with the actual site conditions. This is usually due to the delay brought about by the preparation of plans and project implementation. It also includes the improper design conducted by the less experienced in-house staff of the local government unit or central agency.

*b. Cost over run*

Inavailability of sufficient cash flow, improper measurement and pricing of Bill of Quantities, ill planned project schedule and client's delay in payment.

*c. Environmental and safety concerns*

Environmental permit needs to be complied with covering safety regulations that will have impact on construction implementation, schedule and costing. Environmental permits not only cover the project but also the facilities that the contractor shall set up for the installation and completion of the project. Government responsibility covers the approval of the Environment Compliance Certificate (ECC) of the project. Compliance with the same is left to the contractor leaving him to face abuses from the local government units. On the other hand, breach of environmental law can delay and seriously disrupt a project. It can be subject to a tedious process of court proceedings that can be over-turned by later higher courts.

*d. Quality and availability of materials and labor/efficiency/competency risks*

This risk includes unavailability of materials to be purchased locally. The need to import materials poses the tedious task of procuring permits from the Bureau of Customs. The Philippine government doesn't give necessary support to the proponent on this matter. It also includes obsolete technology and practices

by local partners, and low productivity by the local workforce owing to poor skills or inadequate supervision. Labor and immigration laws will present the concessionaire with an environment that is more or less conducive environment to operation. In addition, middle-income Filipinos made up ten percent (10%) of overseas workers worldwide thus experienced technical personnel in the country is becoming scarce and limited. The employer usually entails local employee with an experience equivalent with the same amount and complexity of which project requires. Thus, the margin of qualified personnel became lesser because only upon the influx of globalization that Filipinos had just been exposed with multi-million projects.

**Table 3: Ranking of Design and Construction Sub-Risks of PPP in the Philippines**

| Design and Construction Risk | % Of respondents | | | | Mean Score | Ranking |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | | |
| Improper design | 15.38 | 40.38 | 26.92 | 17.31 | 1.69 | 2 |
| Cost Over run | 55.77 | 17.31 | 17.31 | 9.62 | 1.19 | 1 |
| Environmental & safety concerns | 28.85 | 21.15 | 28.85 | 21.15 | 1.83 | 3 |
| Quality & availability of materials & labor efficiency/competency risks | 7.69 | 26.92 | 21.15 | 44.23 | 2.27 | 4 |

Cost over run is regarded as the most critical in the design and construction sub risks category. This is mostly due to ill prepared plans that had been pressured for implementation by politicians without any due consideration on revised actual site condition that might affect the second rank major sub-risk (2) with a mean score of 1.69, improper design. Environmental and safety concerns ranked third with the quality and availability of materials and labor efficiency/competency ranked fourth.

### 2.1.3 Force majeure risks

Force Majeure is the circumstances beyond the project developer or government's control such as natural disasters or accidents, war, hostilities, embargo, import or export restrictions that any insurance or third party shall not cover and the government can never recoup. It involves such as civil wars and earthquakes, which cannot be covered by insurance, pose a dilemma. Foreign lenders will rarely be willing to accept force majored risks. Equity investors unless they are offered a return considerably higher than 16% to 18% become reluctant to take the economic consequences and the force majeure risk, this will certainly not guarantee the lenders against force majeure risks except to the extent of their equity (BOT Center and USAID, 1995)

### 2.1.4 Commercial and market risks

This is the risk of market reaction to the project; it involves the volume of people using the facility that will substantially below demand forecasts. It includes the following:

*a. Creditworthiness*

Creditworthiness of the Filipino company or the joint venture consortium refers to the determination of the reliability, competency and performance of obligation of the Philippine entities or the joint venture of Filipino and foreign counterparts. The private sector skills can then be used to put the initial project together, assemble the necessary partners to complete the scheme and manage procurement and operations. PPP systems are, therefore, particularly appropriate when skills are scarce in the public sector. But the BOT Law and its IRR require that the consortium will be least sixty percent (60%) Filipino-owned., thus the Foreign Lender is constrained to determine the creditworthiness.

*b. Competition*

It covers competition from other international investors/developers/contractors. This is more applicable to unsolicited proposals on which the proponent has spent an enormous amount on feasibility study and financial proposal just to be defeated through a Swiss-challenge by another proponent.

*c. Public image*

Public image risk encompasses prejudice set forth by the host country due to different culture, standards, social system, and construction methodology and language barrier.

*d. Intellectual property protection*

Intellectual property protection issues involve former employees, partners and third party trade commercial and trade secrets. Protection of patent and know-how and business secrets is required.

**Table 4: Ranking of Commercial/Market Sub-Risks of PPP in the Philippines**

| Commercial/Market Risks | % of respondents | | | | Mean Score | Ranking |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | | |
| Creditworthiness | 54.90 | 25.49 | 11.76 | 7.84 | 1.13 | 1 |
| Competition | 31.37 | 29.41 | 23.53 | 15.69 | 1.38 | 2 |
| Public Image | 9.62 | 25.00 | 36.54 | 28.85 | 1.83 | 3 |
| Intellectual Property Protection | 1.96 | 17.65 | 23.53 | 58.86 | 2.29 | 4 |

Creditworthiness ranks first in commercial risks. The financial capacity of the consortium plays a major role in the life expectancy of the project. Competition risks rank second with a mean of 1.38 which is significant as it is close to the first ranked mean with 1.13. Intellectual property protection is not considered as critical since most of the ventures in the Philippines don't require new or transferred technologies because major ventures are mostly on roads and highways.

## 3. Conclusion

**Table 5: Criticality of Risks of PPP Infrastructure Implementation of the Philippines**

| Risks of PPP projects in the Philippines | % of respondents | | | | | Criticality Index | Ranking |
|---|---|---|---|---|---|---|---|
| | Extremely critical | Very critical | Critical | Fairly Critical | Not critical | | |
| Political risk | 50.00 | 30.77 | 13.46 | 3.85 | 0.00 | 0.8588 | 1 |
| Force Majeure | 1.92 | 5.77 | 28.85 | 46.15 | 17.31 | 0.4577 | 4 |
| Design & Construction risk | 7.69 | 36.54 | 26.92 | 15.38 | 5.77 | 0.6542 | 3 |
| Commercial/Market risk | 17.31 | 32.69 | 28.85 | 5.77 | 5.77 | 0.7106 | 2 |

Political risk is regarded as the most critical risk as perceived by private and public entities as agreed by fifty percent of the respondents. In cases when the government fails to follow the provisions of the contract, the contractors have the choice of turning to the justice system for resolution. In the case of MRT, the contractors claim for early completion bonus was awarded only after 8 years of court battle (Requejo, 2007). The NAIA 3 and ZTE controversy have fueled fear among international financiers. The issue on the legality of collecting toll on the Coastal Road that connects Cavite to Manila has been recently affirmed by the Supreme Court. The preliminary injunction was issued last June 23, 1998. It was only last November 18, 2007 that the injunction was lifted and the collection of toll by the Coastal Road Corporation is deemed legal (Araneta, 2007).

Commercial risks and design risks ranked second and third respectively. Force majeure is not considered as critical for most of the public sector covers the risks not shouldered by Insurance companies.

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