CS-225

PRC PPI INDEX

Identifying and Comparing Models of Private Participation in Infrastructure in China

東京大学学生会員マクドナルド レジナルド東京大学正会員竹内佐和子東京大学フェロー会員國島正彦

Abstract

"BOT", "IPP", "PFI": the acronyms describe modes of Private Participation in Infrastructure (PPI) which have been receiving increasing attention in Asia and around the world in recent years. Depending on the configuration of a variety of factors, PPI can provide everything from a critical link for reforming infrastructure development ... to a slightly broader set of funding options for publicly controlled facilities. To clarify the situation, it is proposed that a limited set of factors can be examined to provide a systematic basis for categorization and comparison of infrastructure concessions. The factors described here include: ownership, control, responsibility, competition, financing, openness, and return profile. While the approach described is qualitative, it is suggested that a "PPI Index" could be defined to combine the factors and provide a tool for understanding infrastructure projects with private participation.

In the paper, the author applies this approach to infrastructure projects in the People's Republic of China. The examination indicates that a variety of PPI models have evolved in the PRC over the past 15 years, featuring widely different configurations of factors. A brief explanation of the reasons behind these differences is provided.

Introduction

It is proposed that infrastructure concessions can be examined on the basis of a limited set of factors to determine their characteristics and provide a tool for categorization and comparison. Specifically, the factors include: ownership, control, responsibility, competition, financing, openness, and return profile. In the following section, the factors are identified and explained. Next, foreign invested infrastructure projects in China are examined and their PPI factors considered.

Factors

When considering an infrastructure project with private participation, it is informative to examine the project structure by the following factors:

Ownership: The first issue to consider is the ownership structure of the project, including private vs. public ownership of the project company and all project-related property rights.

<u>Control</u>: Control is critical, as owners should ideally not be able to exercise control over the project commensurate with their level of ownership. Control over decision processes for design, construction, financing and operation are considered.

Responsibility: Through guarantees and insurance, responsibility for specific risks may be transferred to parties with neither ownership nor control over a project. The provision and enforceability of first and third party responsibility are considered.

<u>Competition</u>: The degree of competition is important in maximizing the efficiency of most ventures, and PPI projects are no exception. The degree of competition during project tender, construction and operation phases is considered.

Financing: A key feature of PPI projects is access to new sources of financing for infrastructure. Public vs. private sector, domestic vs. foreign, and debt vs. equity sources of finance are examined.

Return Profile: Cash flow and return profiles to project financiers are indicative of their priorities. Debt and equity form the most basic return profile categories; however, "mezzanine" returns with both debt and equity features are also considered.

Openness: It is worthwhile to examine the degree of openness to participation by foreign private companies in infrastructure. Foreign participation may be constrained by laws and regulations, or by local vested interests.

PRC Projects

Since the 1980s, central and regional governments in the PRC have attempted to overcome infrastructure bottlenecks and ensure sustained economic development. With high demand and limited public budgets, modes of private – particularly foreign – participation in infrastructure have evolved. The two main legal categories of PRC infrastructure project structures are *Sino-Foreign Joint Venture* (S-F JV) and *Build-Operate-Transfer* (BOT), according to the definitions under Chinese law. S-F JV in turn features a number of sub-models. The models display widely different traits when the PPI factors described above are considered. Reasons for this divergent evolution lie in the priorities of the private and public, foreign and domestic stakeholders participating in each project.

<u>Keywords</u>: 連絡先:

PPI, Ownership, Control, Responsibility, Competition, Financing, Openness, Return Profile 東京大学大学院工学系研究科社会基盤工学専攻・建設マネジメント/開発システム研究室

〒113-8656 東京都文京区本郷 7-3-1

電話: 03-3812-2111(内線 6143) ファックス: 03-5689-7267 電子メール: regm@iname.com

土木学会第54回年次学術講演会(平成11年9月)

Sino-Foreign Joint Venture: S-F JV models generally involve a foreign party in cooperation with a regional, provincial or municipal government agency or enterprise. The foreign partner helps to finance the costs of development, then shares in the revenues from the operational facility for a set period of time. When this period expires, the foreign partner transfers its ownership interest in the project to the local partner. The division of ownership, control and other aspects of the project are subject to negotiation within an ambiguous legal environment.

Build-Operate-Transfer: In China, the term "BOT" refers to a specific project model and legal structure developed by the central government in 1995. The key differences from S-F JV models are that: (1) the concession is granted by international competitive bid; (2) the foreign winner of the bid is allowed to own a controlling interest in the project company; (3) the foreign party is allowed to have control over facility operation; (4) the government agencies involved are authorized to provide limited support and guarantees of specific undertakings by Chinese government-affiliated corporations involved in the project, including foreign exchange and convertibility, but are not allowed to provide any form of guarantee regarding the project's rate of return.

Ownership: As a BOT, 100% foreign private ownership of the project company and related property rights is permitted; however, this ownership is not permanent, since the facility must be transferred to the government after a set period of time. In S-F JV projects, foreign ownership of infrastructure facilities may be limited by regulations, and is otherwise the subject of case-by-case negotiation. As a result, there is a range of S-F JV project company ownership structures, from majority (usu. 55 – 75%) to minority (usu. 15 – 49%) foreign private stakes, with local government entities taking the remainder.

Control: Under the BOT structure, 100% foreign private control over facility construction, financing and operation is allowed. As a S-F JV, local governments often attempt to maintain control over construction and operation, leaving only financing decisions to be controlled by the foreign party. Some private investors accept this, regarding such projects as pure financial investments; however, sponsors with technical expertise often try to negotiate for control over important operational decisions in order to actively manage their investment and maximize overall project returns.

Responsibility: Allocation of responsibility (risk) is legally defined under the BOT model. A limited number of government guarantees are available to ensure that the project company can access and convert currency during the concession; however, no guarantees for returns are provided. Sponsors can pay an appropriate premium to offload their responsibility for project risks to third parties. Under S-F JV structures, local governments have often provided minimum return guarantees to foreign sponsors, meaning that final responsibility for risks like project revenue shortfalls rests with the local public sector. In other negotiated JVs, foreign sponsors have provided guarantees, bearing responsibility for risks associated with construction and operation even while being unable to exercise control over these areas.

Competition: Chinese BOT requires open international bidding, with competition emphasizing low user prices. Pilot BOT projects to date have featured intense competition leading to low user prices and innovative financing structures. S-F JV projects are generally decided by negotiation: competition among prospective sponsors is limited to identifying possible projects and approaching local governments for investment opportunities.

<u>Financing</u>: BOT projects tend to rely heavily on international commercial bank financing and funding from export credit agencies; in contrast, S-F JV projects have accessed combinations of commercial bank debt and international capital markets via bond issues in the US, stock market listings in Hong Kong, as well as various creative private equity arrangements.

Return Profile: In a BOT, lenders receive debt principal and interest repayments and sponsors receive equity returns with possible enhancement by taking on EPC, O&M and other project contracts. S-F JV projects tend to feature far more complicated arrangements: foreign sponsors in a JV can negotiate a preferred dividend distribution structure which makes their equity investment take on characteristics similar to debt. When equity returns are guaranteed by local government at while capping the rate of return to sponsors, return profiles are comparable to a municipal bond by an unrated issuer.

Openness: The BOT model is the most open PRC infrastructure model, requiring open international tender of concessions. Foreign ownership and control in S-F JVs may be constrained by regulation or vested interests. The fact that S-F JV's are negotiated in the absence of a transparent tendering framework makes them less open to new market entrants.

Conclusions

The qualitative examination of private participation in Chinese infrastructure indicates that a variety of project models with has evolved to supplement conventional public resources in providing infrastructure facilities to the PRC's growing economy. The officially sanctioned BOT structure represents an attempt by the central government to legally define issues of ownership, control, responsibility and competition. Meanwhile, S-F JV structures have proliferated, providing a flexible basis for negotiated infrastructure deals involving local governments and foreign private investors under the PRC's decentralized administration. S-F JV projects feature a broad range of PPI factors, and can display traits of municipal bonds in some instances or BOT concessions in others. The systematic examination of PPI project structures is a useful approach to understanding infrastructure investment and development in China.

Acknowledgements

This paper is based on existing literature, as well as interviews with private firms and government agencies in Beijing, and Hong Kong. The authors would like to express their gratitude to those who cooperated with the interviews, as well as to the Ministry of Education of Japan for providing financial support under the Grant-in-Aid, number 10305038.