MANCHESTER 1824
The University of Manchester

The University of Manchester Research

Taking Stock of PPP and PFI Around the World.

Link to publication record in Manchester Research Explorer

Citation for published version (APA):
Winch, G., Onishi, M. (Ed.), & Schmidt, S. E. (Ed.) (2011). *Taking Stock of PPP and PFI Around the World.* Association of Chartered Certified Accountants.

Citing this paper
Please note that where the full-text provided on Manchester Research Explorer is the Author Accepted Manuscript or Proof version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version.

General rights
Copyright and moral rights for the publications made accessible in the Research Explorer are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

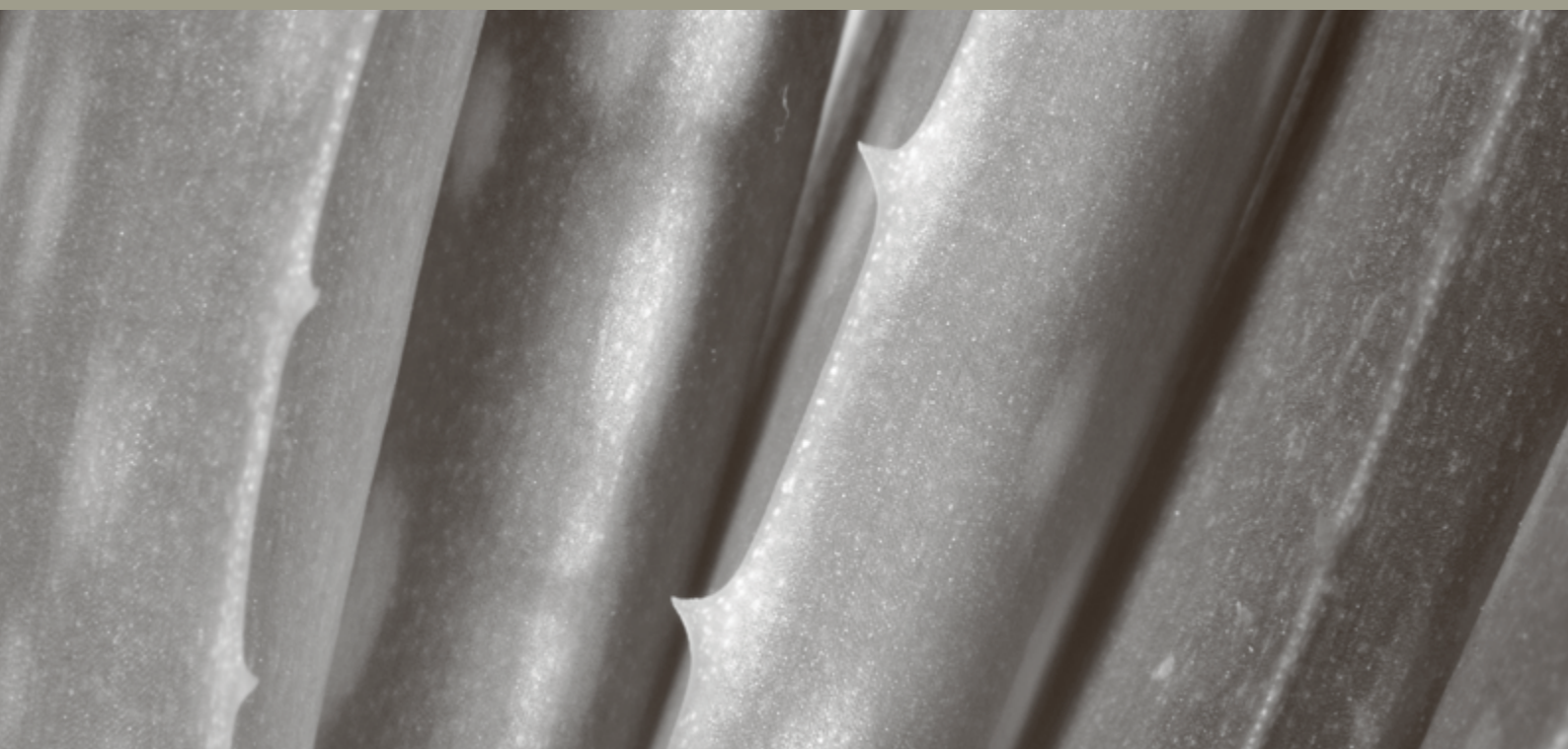
Takedown policy
If you believe that this document breaches copyright please refer to the University of Manchester's Takedown Procedures [http://man.ac.uk/04Y6Bo] or contact openresearch@manchester.ac.uk providing relevant details, so we can investigate your claim.

OPEN ACCESS

Download date:08. Oct. 2026

SUMMARY OF RESEARCH REPORT 126

Taking Stock of PPP and PFI Around the World



Taking Stock of PPP and PFI Around the World

Edited by

Graham M. Winch
Manchester Business School

Masamitsu Onishi
Kyoto University

Sandra Schmidt
The University of Manchester

Certified Accountants Educational Trust (London), 2012

ACCA's international research programme generates high-profile, high-quality, cutting-edge research. All research reports from this programme are subject to a rigorous peer-review process, and are independently reviewed by two experts of international standing, one academic and one professional in practice.

The Council of the Association of Chartered Certified Accountants consider this study to be a worthwhile contribution to discussion but do not necessarily share the views expressed, which are those of the authors alone. No responsibility for loss occasioned to any person acting or refraining from acting as a result of any material in this publication can be accepted by the authors or publisher. Published by Certified Accountants Educational Trust for the Association of Chartered Certified Accountants, 29 Lincoln's Inn Fields, London WC2A 3EE.

ISBN: 978-1-85908-475-5

© The Association of Chartered Certified Accountants, February 2012

Contents

Executive summary	**5**
1. Introduction	**7**
2. The private finance of public infrastructure	**11**
3. Cross-country case analysis	**16**
References	**23**

Part 2: Country case studies		**27**
4.	**Public private partnership implementation in China** ShouQing Wang, Tsinghua University, Beijing, Yongjian Ke, National University of Singapore, Jing Xie, Tsinghua University, Beijing.	29
5.	**The challenges of implementing new forms of PPP in France** Elisabeth Campagnac, Ecole des Ponts Paristech, Translated by Sandra Schmidt and Graham Winch	37
6.	**Public private partnerships in India: recent policy initiatives and investment trends** Gautam Ray, Kyoto University	45
7.	**Public private partnership in Indonesia: Is infrastructure development in Indonesia shifting towards a decreasing role for government?** Pradono, Wishnu Bagoes Oka and Diandra K. Pratami, Institute of Technology of Bandung	55
8.	**Current status and perspective of private finance in Japan** Masamitsu Onishi and Kiyoshi Kobayashi, Kyoto University	67
9.	**Understanding Malaysia's public private partnership** Khairuddin Abdul Rashid, International Islamic University	75
10.	**The use of the public private partnership concept in Singapore** Asanga Gunawansa, National University of Singapore	90
11.	**Current status and perspectives of public private partnership for infrastructure projects in South Korea** Myungsik Do, Hanbat National University, Hyeon Park, Korea Development Institute	99
12.	**Review of public private partnership implementation in Thailand** Veerasak Likhitruangsilp, Chulalongkorn University	109
13.	**30 Years of private finance in the United Kingdom** Graham M. Winch, Manchester Business School	117

Executive summary

INTRODUCTION

In the aftermath of the most significant financial crisis in decades, governments are seeking new forms of financing to support sustainable public services. This report offers an interesting insight into how governments are approaching public private partnership (PPP) and private finance initiative (PFI) schemes across 10 countries.

The research includes two European countries with 'mature' approaches to PPPs (France and the UK), and eight Asian countries with growing use of PPPs (China, India, Indonesia, Japan, Malaysia, Singapore, South Korea and Thailand).

The report addresses the following questions.

- What are the drivers of PPP promotion as a contextual factor of policy development?
- What are their commonalities and differences?
- How do the contextual differences influence the shape of PPP policy and implementation from the perspective of government's role and the national institutional framework?
- What are the impacts of accounting treatment on PPP promotion?
- What are the lessons learned from experiences around the world?

SCOPE

The report provides an up-to-date view of developments in Europe and contrasts these with the diffusion, evolution and translation of practice in the Asian countries. The Asian countries themselves vary between two developed economies (Japan and Singapore) and six rapidly growing countries, including two of the so-called BRIC countries (China and India). The report examines the different national social, economic and political contexts that affect the development and implementation of PPPs, including the legal framework, popular project types and accounting treatment methods.

The focus of the research is on PPP projects where responsibility for the provision of the service remains in the public sector, but the finance comes from the private sector, including facilities where infrastructure-asset ownership reverts to the public sector at the end of the concession period. Two distinctive types of scheme were found across the countries.

- The 'user pays' type occurs where the user of a facility pays directly for the use of that facility. This arrangement is most commonly known as a concession or build–own–operate–transfer (BOOT) project.
- The 'unitary charge' type is one where the private sector is reimbursed by the government either on an availability basis or by a shadow toll. This appears to have been an innovation by the UK government in the early 1990s and was originally known as the Private Finance Initiative but the arrangements concerned were renamed Public Private Partnerships following a change of government in 1997.

FINDINGS AND CONCLUSIONS

There is no precise and commonly accepted definition of PPP.

The interests and objectives of the public and private parties in entering into PPPs are diverse. The need to enter into PPPs by the public sector has been generally driven by a lack of finance, a need for modern technology and/or for effective and efficient management skills, and the need to transfer risk. PPPs have offered the private sector new investment opportunities, new markets and the opportunity to form partnerships with the public sector, which has in the past enjoyed a monopoly in the provision of certain infrastructure facilities.

The reasons why public sector and private sector entities enter into PPPs differ from project to project and country to country. Even within one country there are numerous forms of partnership, which seem to have evolved on a 'whatever works' basis shaped by the political, regulatory and technical constraints affecting the project.

The drivers of PPP development are a decisive factor in shaping the institutional arrangements in each country. The major PPP driver is the gap between demand for infrastructure development, and a government's ability to meet its funding. In other words, the increased use of PPP globally stems from the desire for additionality to the public funding capability. This may be a controversial conclusion in developed countries such as France, Japan and the UK, where governments claim that the value-for-money benefit is the reason behind the use of PPP, but this research report provides some evidence to support the claim that a key driver is additionality.

Developing countries are as keen as developed countries to promote PPP for additionality reasons, but the mechanism by which the funding gap arises is different. Developing countries that are experiencing rapid economic growth have huge demands for investment in infrastructure and public services. Governments in these countries are not, however, able to procure enough liquidity (capital) to meet the demand for such developments through tax impositions, as their national wealth is still at a low level. In countries enjoying a virtuous cycle of investment–growth–more private investment, people believe that investment in infrastructure will generate enough income to pay for itself through national economic development. This is different from the situation in many developed countries where the funding shortage comes from the public sector net debt (PSND) constraint.

The dominant scheme in developed countries is the 'unitary charge' type while the dominant scheme in developing countries is the 'user-pays' type. As developing countries enjoy higher economic growth rates, it may be much easier to justify investments in infrastructure.

All the case study countries have a unit responsible for auditing government accounts and evaluating PPP implementation, and this can play an important role in improving PPP policies. Countries where the value-for-money criteria are in principle predominant – particularly the PSND-constrained countries – are more likely to invest money in the evaluation of PPP policies and implementations; for example, the UK. Countries where value-for-money criteria are less emphasised are likely to be reluctant to provide resources for evaluation.

The acquisition of durable assets requires finance for initial investment. This research report seeks to show who supplies finance for infrastructure investments and how the returns on the investment are reimbursed to financial capital suppliers. India and Indonesia support PPPs through government grant assistance. Other forms of government financial assistance are long-term debts to secure financial stability or government-affiliated funds established for credit enhancement for PPPs through guarantees. Multilateral development banks may also provide financial assistance.

Given that PPP is an enabler of additionality to public finances, the accounting treatment chosen is likely to have a greater impact on the attractiveness of PPPs in the PSND-constrained countries than in other countries, because it determines the border between what is on and off the public balance sheet. Accounting treatment is not a subject of national debate in non-PSND-constrained case countries. The issue of the accounting treatment of PPP projects is much more relevant in developed countries, where a gap in the ability to fund public service demands arises from the pressure towards fiscal reform. There, whether or not the government commits to long-term payment to the private sector and guarantee for credit enhancement are deemed to be within the PSND is a critical factor in determining the government's incentive to employ private finance for public infrastructure provision.

The difference in the motives of PPP promotion between developed countries and developing countries has a substantial impact on the significance of assessments of value for money. The value-for-money criteria of PPP is defined as the expected reduction of life cycle cost and the estimated value of the risk transferred. In Japan and the UK, the government must assure the public that PPP is the best option for procurement in terms of value for money. For the countries where the merit of additionality, rather than economic efficiency, is regarded as important, the assessment of value for money is not stressed. Value for money is not a relevant argument in developing countries because governments are more concerned with meeting the growing demand for infrastructure than with the efficiency of its construction and operation. Therefore, the assessment of value-for-money criteria done in developed countries is not applicable to the context of developing countries.

Countries that have not developed any guidelines for assessing value for money include China, India and Indonesia. The vulnerability to manipulation of value-for-money assessment is also a common issue. The experiences in the country cases show that risk allocation between the government and the private sector is one of the key factors in the success of PPP projects. Many countries demonstrate poor practice in that the public sector takes on an excessive burden of risk, particularly at the early stage of PPP application. Dysfunctions of risk transfer can stem not only from contract arrangements but also from institutional dynamics.

AREAS IDENTIFIED FOR FURTHER RESEARCH

This report identifies three areas for further investigation, as follows.

1. The importance of project selection: the country case studies suggest that more research is required into the strengths and weaknesses of cost–benefit analysis and discounted cash flow as investment appraisal tools and the extent to which they serve as drivers for infrastructure project selection.

2. The issue of additionality has tended to be ignored in recent research, compared with research into value for money. It raises questions about areas such as the conditions under which additionality is genuinely achieved. This also leads to the broader issue of infrastructure finance; for example, to what extent should the principle of partnership be extended to the provision of finance in situations where the public and private sectors both put in finance almost as joint venture partners? There are issues of accountability and viability around these types of initiative; for example, under what conditions do guarantees and government-backed loans deliver significant public policy benefits?

3. Questions need addressing as to how countries are to fund the resources to develop their infrastructure so that it is an enabler of, rather than a constraint on, economic growth, and how to ensure that economic growth is sustainable in environmental terms.

1. Introduction

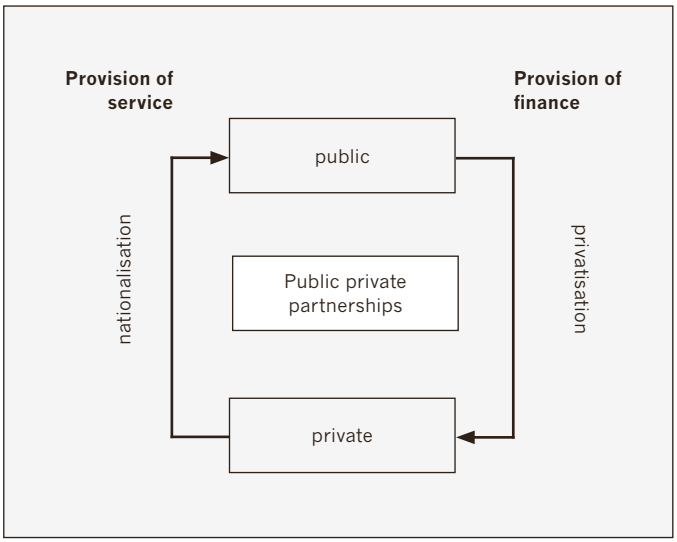
Graham Winch, Asanga Gunawansa, Sandra Schmidt and Masamitsu Onishi

BACKGROUND TO THE RESEARCH

ACCA commissioned Manchester Business School, working with the Graduate School of Management at Kyoto University, to investigate the diffusion of public private partnerships (PPPs) around the world. Two European countries with 'mature' approaches to PPPs (France and the UK) were selected along with eight Asian countries with growing use of PPPs (China, India, Indonesia, Japan, Malaysia, Singapore, South Korean and Thailand). The aim was to gain an up-to-date view of developments in Europe and then to contrast these with the diffusion, evolution, and translation of practice in the Asian countries. The latter vary between two developed economies (Japan and Singapore) and six rapidly growing countries, including two of the so-called BRIC countries (China and India). The full list of contributors is given in the appendix.

THE SCOPE OF THE RESEARCH

Figure 1.1: The scope of the research



The research was concerned with the cases where responsibility for the provision of the service remains in the pubic sector but the finance comes from the private sector, including facilities where ownership of the infrastructure asset reverts to the public sector at the end of the concession period. This is distinct from both privatisation, where the whole responsibility for service delivery and ownership of the infrastructure assets that enable it are moved to the private sector, and sale-and-lease-back arrangements, such as estates outsourcing, where assets are permanently transferred.

THE DEVELOPMENT OF PPPS

Historically, public infrastructure has been created mainly by the public sector, using traditional procurement methods such as design–bid–build and 'design and build'. Further, public finance has been used to award contracts to private sector contractors. The public sector entities awarding the contracts have been in charge of the actual provision of services to the public once the projects have been developed. Thus, in the past, the private sector's role was limited to designing and constructing facilities.

As governments faced the challenge of stretching scarce public funds to meet the increasing demand for new and modern infrastructure facilities while also performing the other duties expected of modern welfare governments, the need to engage the private sector in providing the infrastructure for public services arose for a variety of reasons. In developing countries, the key reasons were the lack of public funds and the need for modern technology and efficient management skills. For developed nations, allocation of project risks was the key reason. Thus, public private partnership (PPP), under which the public sector entities could work with private sector entities in developing, managing and providing public services to the people, became the popular option for many countries.

In the 1980s, governments considered two alternative mechanisms for engaging the private sector: total privatisation of public facilities and PPPs (Ford and Zussman 1997). The former enables governments to transfer to the private sector the total responsibility for developing, managing, and providing public services. The latter enables governments to invite private sector entities to finance and develop infrastructure projects without losing state control over the regulatory aspects of service provision, including the pricing of the services provided by the infrastructure facility (Gunawansa 2000, Savas 2000, Abdul-Aziz 2007). Over time, the total privatisation of public infrastructure facilities at prices heavily subsidised by the governments became politically controversial. Further, governments were hesitant to subject certain facilities to total privatisation for reasons such as national security. Thus, PPP became the popular option.

UNDERSTANDING PPPs

According to the dictionary definition in Webster, a partner is 'one of two or more persons contractually associated as joint principals in business'. The same dictionary defines 'partnership' as a legal relation existing between two or more persons contractually associated as joint principals in a business. According to *Duhaime's Legal Dictionary*, a 'partnership' is an organisation in which two or more persons carry on a business together. Thus, it is not difficult to conclude that a public private partnership is a contractual arrangement in which a public sector entity and a private sector entity come together to do business.

Nonetheless, as noted by Khanom (2009), there is no precise and commonly accepted definition of PPP. The difficulty arises as a result of the diverse interests and objectives of the public and private parties when entering into PPPs. For the public sector, as noted earlier, the need to do so may arise for one or more of the following reasons: lack of finance, the need for modern technology and/or for effective and efficient management skills, and the need to transfer risk. For private sector entities, PPPs offer new investment opportunities, new markets and the opportunity to work with the public sector, which has in the past enjoyed a monopoly in provision of certain infrastructure facilities (Gunawansa 2000).

The needs of both public and private sector entities when entering into PPPs can differ from project to project and jurisdiction to jurisdiction. This is another reason for the absence of a common definition of PPP. For example, the needs of a cash-strapped developing country entering into a PPP to develop a project to provide clean water or electricity to its citizens will be different from the requirements of a developed country in considering a PPP for developing an airport or a highway.

One definition of PPP as embraced by the Canadian Council for PPP is:

> *A cooperative venture between the public and private sectors, built on the expertise of each partner, that best meets clearly defined public needs through the appropriate allocation of resources, risks and rewards.*

In the UK, Her Majesty's Treasury (1998) defines PPP as:

> *An arrangement between two or more entities that enables them to do public service work cooperatively towards shared or compatible objectives and in which there is some degree of shared authority and responsibility, joint investment of resources, shared risk taking and mutual benefit.*

In Singapore, the Ministry of Finance (2004) has defined PPP in these terms:

> *PPP refers to long-term partnering relationships between the public and private sector to deliver services. It is a new approach that Government is adopting to increase private sector involvement in the delivery of public services.*

In India, the Department of Economic Affairs of the Ministry of Finance (2005) defines PPP thus:

> *The Public-Private Partnership (PPP) Project means a project based on contract or concession agreement between a Government or statutory entity on the one side and a private sector company on the other side, for delivering an infrastructure service on payment of user charges.*

The Canadian definition focuses on the cooperative venture between the public and private parties and the appropriate allocation of resources and risks. This indicates that PPPs are looked at as 'partnering' arrangements between parties with equal bargaining power. Similarly, the UK definition focuses on compatibility between the parties and the sharing of responsibilities, risks, resources and profits.

The Singapore definition focuses on PPPs as a long-term relationship between public and private sectors that enables the public sector to involve the private sector in providing services to the people. This definition does not give any indication as to the real need for the public sector to enter into PPPs. Further, in Singapore, PPP is also seen as a way of bringing in specialist private sector expertise to stimulate an exchange of ideas and bring more international players into the domestic market (KPMG 2007).

The Indian definition focuses on the fact that the government gives a concession to the private sector to develop a project and provide services in return for payment of user charges. The public sector's engagement in the partnership is limited to the granting of the concession, owing to financial constraints and lack of modern technology. The private sector is required to finance and develop the project and offer services in return for payments.

TYPES OF PPP

This focus on the notion of 'partnership' tends, however, to obscure different types of partnership arrangement. Even within one country there are a number of forms of partnership, which seem to have evolved on a 'whatever works' basis shaped by the political, regulatory and technical constraints around the project. In practice, this variety can be categorised in two distinctive types that are of particular interest across these different country cases.

The 'user-pays type' occurs where the user of the facilities pays directly for the use of the facility – the classic example here is a toll road, or turnpike. This arrangement is most commonly known as a concession or build–own–operate–transfer (BOOT) project. Its origins lie in 17th-century France and Louis XIV's attempts to build the infrastructure of the nation.

The 'unitary charge type' occurs where the private sector is reimbursed by the government either on an availability basis or by a shadow toll. This appears to have been an innovation by the UK government in the early 1990s as it tried to square major public spending cuts with a commitment to maintaining public services, particularly in health. This arrangement was originally known as the Private Finance Initiative in the UK but such projects were renamed public–private partnerships with a change of government in 1997.

We will see in the following chapters how important it is to understand the differences between these two types of PPP.

THE RESEARCH METHOD

At the start of the research in February 2010, the research team agreed with the sponsor a model chapter structure for each of the national teams to follow. First drafts of the country case studies were then prepared in advance of a workshop, held in Kyoto in September 2010. At the workshop each case study was presented and discussed in the round. It rapidly became clear that the final report based on ten country cases covering all the points in the model structure would be a very large document indeed, and one that would inevitably contain much repetition. It was decided, therefore, to ask the authors of each country case to limit their contributions to around 6000 words and to request that they focused on what they believed to be of most interest in their particular country. So, for example, the Indian case presents viability gap funding, while the South Korean case explores the issues around minimum revenue guarantees. Drawing on the second drafts of the country cases, a cross-case analysis was then prepared which draws out some of the key contrasts and commonalities across the ten countries. This is complemented by a theory chapter because it did not seem appropriate to include a literature review in any of the country cases, as these aim to provide a more descriptive account, thereby developing an empirical base for future inductive theorising.

The country cases are rather variable in content, but the advantage of this is that they focus on the issues of importance in the debate in each country, rather than reflecting the interests and issues in the UK debate, which the original model structure tended to do. The standard of English is also rather variable because the majority of authors are not writing in their mother tongue. In order to improve consistency in writing style and presentation, all twelve chapters have been edited by our editor, and the chapter on France was translated from the French by the principal investigator. It should be emphasised, though, that the chapters have been edited, not rewritten. In the interests of retaining authorial voice we have not attempted to bring the English of all chapters up to the standards expected of a native speaker. Nevertheless, it is hoped that they remain clear enough to allow understanding.

FURTHER RESEARCH

This work has ranged broadly and covered many aspects of the topic. It is appropriate to reflect on what has been found and to suggest some lines of enquiry for further research on the private finance of public infrastructure. One topic where no further research is suggested is on value for money. This has been extensively explored, particularly in the UK, and it would seem conclusive, after drawing on a wide body of research including that conducted by the UK's National Audit Office, and earlier work sponsored by ACCA, that only in rare cases can there be high confidence that a private finance alternative (PFA) offers greater value for money than a Public Sector Comparator (PSC). The theoretical and empirical reasons for this are explored in Chapters 2 and 13. Moreover, value for money in the sense used in the UK is of little interest to countries with rapidly growing economies as the costs of doing nothing are relatively high owing to the lost economic growth incurred if infrastructure is not provided. While such countries still need to allocate the funds available to the most valuable projects, this is a matter of choice between projects, not a choice of how to fund a chosen project.

This point suggests the next area for research. The importance of project selection suggests that much more research is needed into the strengths and weaknesses of cost-benefit analysis (CBA) and discounted cash flow (DCF) as investment appraisal tools and the extent to which they serve as 'an engine not a camera' (MacKenzie 2008) for infrastructure project selection. Whether their growing deployment amounts to a 'financialisation' or 'accountingisation' (Broadbent et al. 2008) of infrastructure funding or reflects a growing dependence on tools and techniques derived from engineering to support business decision making remains to be explored.

This research agenda is rendered more urgent by the UK government's new commitment to rank order all capital projects from a zero base using CBA (*Financial Times* 4 June 2010).

If the aim is to provide positive net present value, the question remains about how the project is to be funded. This turns us back to the issue of additionality, which has tended to be ignored in recent research, compared with value for money, narrowly defined. Under what conditions is additionality genuinely achieved, as opposed to the pseudo-additionality inherent in the UK's Private Finance Initiative? This would appear to be a much easier question to answer in a place such as China rather than, say, France, owing to the much larger 'infrastructure gap' in the former.

Funds providing additionality come from the private sector and so much more research is needed into the somewhat opaque world of infrastructure finance – Freud's account (2006) of its birth does not inspire confidence. There are now a substantial number of specialist infrastructure funds deploying the world's savings to finance infrastructure projects, yet the sector still lacks appropriate expertise (Palter et al. 2008). Page and his colleagues (2008) provide only a tentative start here, and, as suggested in Chapter 5, these flows of funds for infrastructure investment need to be placed in the context of the massive global flows of capital that characterise the world.

The cases of India, Indonesia, and South Korea, in particular, suggest that further research is required into situations where the public and private sectors act more as joint venture partners by both contributing finance to the project. The first step along this road is to underwrite the deal by offering guarantees – something that the UK (with the Channel Tunnel Rail Link) and France are not averse to, but that is much more widespread in developing countries. This can, of course, generate significant moral hazard as the South Koreans have found. This approach can be taken further by the public sector's participation in the provision of finance. The UK government took a step down this road in 2009 by establishing HM Treasury's Infrastructure Finance Unit, but in the end only the Greater Manchester Waste PFI used public funds to close a deal. In many areas of Asia, what the Indians call viability gap funding is seen as an important element of public policy for infrastructure. A further extension of this approach is the establishment of public sector infrastructure funds as in the Indonesia Infrastructure Guarantee Fund and Korea Infrastructure Credit Guarantee Fund, which can offer guarantees to the private sector. Similarly, the *Fond Commun de Titrisation* (FCT), currently under discussion in France, would allow the state to guarantee loans made to projects once the construction phase has been completed. In the UK, a 'Green Investment Bank' (a national initiative to fund investments aimed at greening the economy) and 'tax increment funding' schemes (the latter being where local authorities borrow against increased future tax receipts to fund investment) are currently under consideration. There are wide issues of accountability and viability around all these types of initiative that are worthy of rigorous scrutiny. The fundamental question is: under what conditions do guarantees and government-backed loans produce significant public policy benefits?

A final question returns the discussion to its starting point – how are countries to fund the resources to develop their infrastructure so as to enable rather than constrain economic growth? Time has added a further clause to this question: how are governments to fund the massive additional infrastructure investments (eg in new types of power generation and public transport) required to ensure that economic growth is sustainable in environmental terms? In some cases, provision can be left to a regulated private sector but where this is not possible for either political or economic reasons, some kind of partnership between the public and private sectors is the only way to replenish the empty coffers of the state, if there is no political appetite for raising taxation levels significantly or slashing welfare benefits even more. The concession – Colbert's solution in 17th century France – has been widely adopted, but is very difficult to implement in its pure form in the more developed economies, and many developing countries lack the confidence of investors to commit to it without additional support from the state. In the UK, US and France, these questions are under active consideration as the models examined in this research have demonstrated their limitations. For instance, in the UK the former Labour government established Infrastructure UK within HM Treasury and, most recently, the Major Projects Authority has been established within the Cabinet Office. Similarly, developing countries are continually experimenting with new forms of private finance while learning from their mistakes. As demonstrated in these cases, the search for creative solutions to filling the 'infrastructure gap' goes on.

2. The private finance of public infrastructure

Graham Winch and Masamitsu Onishi

INTRODUCTION

The use of private finance as the source of capital for the provision of public infrastructure has both a long history and wide application. Yet it remains contentious on grounds of both policy and practicality. This chapter will review the extensive and growing literature on the use of private finance that articulates these contentions. It thereby provides the theoretical complement to the descriptive reports in the country chapters and the cross-case review. This account starts with an attempt to define clearly what is meant here, without entering into the nuances of various arrangements for privately financing infrastructure projects. Once the relevant terms have been defined, there follows an evaluation, in some detail, of the three issues that underlie the question of whether public infrastructure should be procured using private finance: value for money, public values, and additionality. The aim is to show how all the other aspects of the debate resolve into these three issues, and the evidence leads to the conclusion that private finance can only rarely offer value for money and that the benefits of additionality can be realised only under quite tightly defined conditions.

THE LIGHTHOUSE PROBLEM

The definition of 'private finance' need not detain us long. In the absence of state ownership of profitable productive assets or trading companies, all finance is essentially derived from private economic activity. Public finance, therefore, is the case where the state captures a proportion of the wealth generated through private economic activity by taxation, by selling licences, or by borrowing from private financiers. The state then invests the funds raised on its own account. Private finance, on the other hand, is the case where the private sector, at state instigation, provides funds directly for a specific investment; this is also known as project finance because the loan is secured on the asset being created by the project. The loan may then be repaid directly through the returns generated by that investment, or indirectly through public funds.

Arriving at a clear definition of public infrastructure is, perhaps, more difficult. Neo-classical economists talk of public goods, by which they mean those goods and services where consumption by one person does not reduce supply and no potential consumer can be charged a fee. This means that while the good or service might provide a benefit, private sector investors will not supply because they cannot reap a return. The recommendation is that if the service or good is socially desirable then collective provision is required and that this is best done by government. The 'lighthouse' is the classic example of a public good cited in the economics textbooks (Coase 1974) because it provides a general benefit (avoidance of rocks) for all shipping, yet it is impractical for the lighthouse keeper to charge each passing ship a fee for its services. Modern technology overcomes the fee-collection problem but, as Samuelson notes (cited Coase 1974), this does not necessarily undermine the insights derived from the discussion of the lighthouse problem. It is also the case that, even if a fee could feasibly be charged, it may be more beneficial to the economy as a whole not to do so. In other words, there may be goods and services for which fees could feasibly be charged yet where there are considerable, broader public welfare benefits in not charging, if the cost of service provision would lead to significant under-consumption by those who cannot afford the fees. In these circumstances, therefore, government provision is preferred. Education is a widely accepted example here. Where fees are charged, their aim may be more to ration consumption than to recoup the full cost of provision. Thus, the broad definition of public goods is the outcome of political debate within the nation state and the analysis in this report will accept the current definition in any particular national context.

Economists are also rather uncertain regarding their definition of infrastructure. Research on the contribution of infrastructure to economic growth has tended to define infrastructure as publicly owned capital assets, largely on the basis that this is what can be measured (Gramlich 1994). This would appear to be theoretically justifiable by the neo-classical position on public goods. Nonetheless, most contemporary commentators would not concern themselves with ownership issues in defining infrastructure but focus on its enabling role for other economic activity (OECD 2006; Helm et al 2009) and, therefore, its central role in economic development. While the perception of the importance of what might be called 'classic infrastructure' in the shape of transportation, energy and telecommunications assets is widely recognised, it is reasonable to extend the definition to other assets such as those buildings and information systems that support the delivery of health care. In this report infrastructure assets are defined as those fixed investments that enable the delivery of goods and services to customers. They are complements to fixed assets such as production equipment, often serving to house or connect that equipment. Public infrastructure is therefore the infrastructure required for the supply of public goods and services.

It is worth reiterating the point that Coase (1974) makes in criticism of neo-classical economists who tended to conflate the public provision of a service with the public finance of the infrastructure that enables that provision. He finds that many lighthouses in the UK were in fact built and operated privately on the basis of leases from Trinity House. Trinity House was (and still is) a charitable foundation dating from 1514 and licensed by the Crown to levy 'Light Dues', operate lighthouses, and provide other services related to commercial shipping. It now functions under the auspices of the UK Department of Transport. When the leases fell in, Trinity House took ownership of the lighthouses, so in modern terms the system was one of shadow tolling using hypothecated taxation for running costs and private finance to supply the infrastructure, in the shape of the lighthouse. Attempts to 'nationalise' Trinity House during the 19th century were resisted on the grounds that is would lead to inefficiency and waste because the current system actively engaged ship owners

in the operational oversight of lighthouses, producing a downward pressure on port fees that the public sector would be unable to replicate.

A number of conclusions can be drawn from this brief review.

- There is a class of capital assets that enables the production of goods and services, rather than producing those services directly – this is called infrastructure.
- A relatively large proportion of this class of assets has the character of a public good and so is subject to market failure if left entirely to the private sector to provide – this is called public infrastructure.
- It does not follow necessarily that the state should finance, construct, or operate these assets – the most appropriate means of supply is a pragmatic choice within public policy.

This report uses the descriptor private finance of public infrastructure for the object of enquiry for two reasons. The first is that it captures the conclusions from the exercise in definition; the second is that the widely used alternatives such as public–private partnerships (PPP) or private finance initiatives (PFI) are flexible in application (Hodge and Greve 2007) and can become loaded with normative expectations.The rest of this chapter is an attempt to review the implications of Coase's insight into the relationship between public infrastructure and private finance. This review cannot be comprehensive, because of the large volume of literature that has been developed in the area over the last 20 years, and so it will focus on the three main themes in these debates – value for money, additionality (Hall 1998) and public values. Much of the literature will also be drawn from debates over the use of private finance in the UK, simply because this is where the switch from the public to private finance of public infrastructure has been most pronounced. Arguably, the rapid development in the UK since 1984 has been without precedent internationally. It is probably the most aggressive programme of the private finance of assets for the delivery of infrastructure for public services over the last 30 years. The report will not address the broader set of issues concerning which infrastructure provision should be within the public sector – that is, it will not cover the debates around nationalisation and privatisation where provision switches from public/public to (regulated) private/private. Much of the literature also presumes that private finance of public infrastructure is a good idea and focuses on implementation issues (c.f. Akintoye and Beck 2009; Kwak et al. 2009). The aim here is to respond to the evidence in the country chapters that suggests that a net benefit, compared with other ways of financing infrastructure, cannot be presumed and to focus the review on the debates around the net benefits of private finance. In any case, the implementation literature largely identifies issues common to all infrastructure projects in terms of project governance and management, which need not be a concern here.

ADDITIONALITY

The principal driver for additionality is the policy constraint on public sector borrowing. As Spackman (2002) suggests, these constraints have both a macroeconomic and administrative dimension. Clearly, any economic entity is constrained in its investment activity by its ability to raise capital, which limits its ability to initiate infrastructure projects. In principle, any portfolio of projects that promises a net positive return adjusted for risk would be worth investment. In practice, there are competing claims on the public purse for expenditure that is closer to consumption rather than investment. This means that the macroeconomic constraint tends to be at the level of public expenditure as a whole, defined as public sector net debt (PSND), rather than at the level of the investment portfolio. In practice, the macroeconomic constraint is expressed through the perceptions of those from whom the government wishes to borrow – principally private financiers and sovereign wealth funds – in terms of their confidence in the ability of the government to repay (Keynes 1963). The administrative dimension addresses this issue of confidence by establishing prudential rules for PSND that impose constraints on public expenditure and, hence, on the amount of public funds available for infrastructure investment. An example of such an administrative rule is the application to euro zone countries of the Maastricht criteria that annual public sector net borrowing (PSNB) should not exceed 3% of GDP, and net debt (PSND) should not exceed 60% of GDP. One way of relieving the PSND constraint is for the government to raise income. This is done principally through taxation, but privatisations have also been important at key junctures. This way forward is subject to electoral constraints and having something to privatise.

It follows that policy constraints mean it is likely that there is insufficient public finance available for investment in all viable infrastructure projects. Additionality is the provision of private capital, additional to that available from public sources, for investment in public infrastructure. One way round the administrative constraint is to define the investment as being outside the calculus of the PSND by defining the asset as being off the public-sector balance sheet. In effect, this allows governments to raise more investment capital than the prudential administrative constraint allows. Where such administrative techniques simply shift the capital cost from the capital account to the revenue account through the payment of unitary charges, as in the UK's PFI, then such administrative techniques ease only the administrative constraint rather than the macroeconomic constraint because returns on capital come from public funds through the life of the contract. As shown by Ball and his colleagues (2002), a switch to private finance based on a unitary charge only increases public sector investment in the short term under most assumptions. Where the investment in the public good generates additional revenues through increased private economic activity, however, the macroeconomic constraint is also eased. This is usually achieved in concession-type private finance where capital is repaid through tolls, but it is also the logic behind arrangements such as tax-

increment funding, whereby government agencies borrow against future additional tax revenues to be generated by the investment. One implication of this analysis is that private finance based on a unitary charge is unlikely to provide additionality because it is either aimed at welfare, as in the case of healthcare, or the investment returns are too far in the future to provide adequate returns on capital, as in education.

VALUE FOR MONEY

The issue of value for money has been at the heart of much of the debate about private finance. *Value* is an elusive word and has been since the 14th century, long having two intertwined meanings: value as a measure of worth and value as an explicitly held belief (Ramirez 1999). The next section will consider value as an explicitly held belief; here the focus is on value as a measure of worth. The value of infrastructure investment has long been assessed through appraisal techniques that attempt to calculate the net present value of a 'flow out' of expenditures and a 'flow in' of income, and any project where the inflow is greater than the outflow can be described as value for money. Thus, any infrastructure project that provides a net benefit can be funded, but in the context of scarcity of capital only a proportion of those should be funded, and the concept of value for money captures those projects that should be funded on the basis of higher relative returns on investment. The burden of the value-for-money critique of private finance is that it reduces the returns, and hence value for money, for investment in public infrastructure.

The principal reason for this is that private finance is more expensive than public finance. Table 2.1 shows the typical costs (defined as weighted average cost of capital: WACC) of different kinds of infrastructure finance as a percentage point uplift on direct public funding in the UK as of 2010.

Table 2.1: WACC for different infrastructure funding types

Type of funding	UK funding example	Indicative percentage point uplift for WACC
Public funding	Flood defence	3.913%
Government supported	Network Rail (company limited by guarantee)	+0%–1.25%
Regulated market	Water, electricity (privatised utilities)	+0.25%–3.0%
Availability-based payment	Unitary charge as in Private Finance Initiative (where public sector takes demand risk)	+2.0%–3.75%
Unregulated markets – demand based	User pays, for example a concession (where the private sector takes the demand risk)	+3.5%–7.0%

Source: Infrastructure UK 2010: Table A.1

In principle, the uplifts are the perceived cost of the additional risk taken on by the private sector on behalf of the public sector. These can be seen in the greater uplifts for infrastructure where the private sector takes the demand-related risk for the use of the infrastructure facility. These are for AAA-rated government debt. Where the public authority is not AAA rated, then the cost of public funding will be higher and may tip the balance of advantage towards private funding for unregulated projects. One interesting inference from this table is that there may be value-for-money advantages in simply privatising the public agency within an appropriate regulatory environment rather than keeping the agency within the public sector and using private finance. A second inference is that the funding costs of finance that is based on unitary charges would appear to be anomalous because the public sector retains the demand risk in that case while the regulated utilities take the demand risk in regulated markets, yet interest rates are lower for the latter. It should be pointed out that, in theory, the public sector should be adding the same uplifts to its cost of capital because they are related to the risks of the project, not to the creditworthiness of the final user (Jenkinson 2003). In practice, however, the government tends to act as a self-insurer and spreads its project risks.

In practice, the debate around value for money in the evaluation of privately financed projects has come down to a debate over the public sector comparator (PSC). The purpose of the PSC is to ensure that the use of private finance gives value for money compared with the use of public finance. This is done by calculating a notional cost of using public finance (the PSC) and comparing it with the private finance alternative (PFA). Given the higher cost of private capital, as shown in Table 2.1, the default case will always be that the public finance option is better value for money for a project that is viable in terms of its base case net present value (NPV). In order to achieve greater value for money for private finance, additional factors need to be taken into account in the calculation. The principal way in which this has been done is to calculate the NPV of the risk transferred to the private sector supplier compared with using traditional procurement, in a complex process that compounds the inherent issues in investment appraisal (Heald 2003; Broadbent et al. 2008; Coulson 2008).

There is a broad critique of this approach, which draws on the work of Keynes and Knight on uncertainty (Froud 2003; Broadbent et al. 2008), which arguably is correct. The critique here, however, focuses on the argument that even within the terms of conventional appraisal techniques, the PSC approach is flawed. The usual presentation of the PSC against the PFA presents two-point estimates with the latter lower than the former owing to the value of the risk transferred. In fact, best practice is to use the central estimate complemented by a lowest (with 5% probability) possible and highest possible estimate – a technique known as three-point estimating. These three points can then be used to generate a probability distribution using Monte Carlo simulation (Partnerships Victoria 2003; Merna and Lamb 2009). It follows that there will be a

degree of overlap between the probability distributions for the PSC and PFA depending on the difference between the central estimates. Where the curves overlap, the PFA is more expensive than the PSC. The closeness of many PFAs to PSCs – sometimes the difference is less than 1% (eg Froud 2003; Shaoul 2005; Khadaroo 2008) – suggests that this overlap will be quite large. In the case of the Ministry of Defence (MoD) Main Building refurbishment (National Audit Office 2009b) the difference was 0.0001%, rendering the chance that the PSC would be less than the PFA at around 50%. In addition, adjustment to the PFA, outside the probability calculus, for the loss of public sector flexibility and for transaction costs that are identified by HM Treasury (2006) but not costed in the methodology would shift the PFA to the right, thereby increasing the probable size of the overlap.

The Special Purpose Vehicles's (SPV's) response to the probability of a worse-than-expected outcome is to provide a contingency in its estimates and, hence, in its bid for the project (the public sector client would also normally do this but the PSC methodology explicitly excludes doing so). In effect, the public sector client is buying an insurance policy from the SPV for the project – the price of the premium being the difference between the base cost and the unitary charges paid to SPV. The mechanism to ensure that this premium is not excessive is competition between the SPVs for the project, but this is problematic (National Audit Office 2007) as many invitations to tender only attract two bidders, and changes are often made to the PFA once a preferred bidder has been accepted. There is, therefore, a significant risk that the public sector is paying too high a premium for the risk transferred even though there does appear to be cumulative evidence that the privately financed projects do perform better in this respect than publicly financed ones (National Audit Office 2009b, Raisbeck et al 2010).

How high is this premium? A European Investment Bank (EIB) analysis (Blanc-Brude et al 2006) found that the cost at tender stage of DBFO roads was 24% per kilometre more than conventionally procured roads and that the bulk of this premium was the pricing of the project execution risk passed to the SPV. These figures are little different from those quoted for the overrun on publicly financed projects. Shaoul and her colleagues (2006) arrive at a figure of 25% by a different method and report (2008) a similar figure for hospitals. It is not clear why an arrangement which makes it certain that the public sector will pay the costs of the risks on the project (via the transfer premium) is better than one where it faces only the probability of paying for the risk event should it occur and where it could give itself the opportunity of improving its own performance to mitigate risk. If the EIB analysis is correct it suggests that the SPV is providing no additional risk-management capability; rather, it is simply being paid to take the hit of the risk event should it occur. If the analysis by Shaoul and her colleagues (2006) of the relatively high profitability of DBFO contracts is correct, the premium being paid for the risks transferred is far too high.

PUBLIC VALUES

Infrastructure projects inevitably bring values into confrontation with each other, and this is typically addressed through procedures for regulatory consent and stakeholder management (Winch 2010). Two debates have developed around the specific issue of private as opposed to public finance. One set of arguments aligns itself with the neo-classical position that public goods should be provided by the public sector, and that any movement of that provision to the private sector is a fundamental attack on the principle of public services. For instance, Shaoul (2005; 2009) argues, inter alia, that the private finance of hospitals:

- transfers wealth to the private sector through the unitary charge payments, rather than recycling it within the public sector
- achieves financial viability for the hospitals concerned by changing the provision of services in the local healthcare economy.
- uses discounted cash flow (DCF) techniques that are inherently about profit maximisation rather than the effective delivery of public services.

Arguably these criticisms are based on some misunderstandings, such as those outlined below. Public finance for capital investment is raised by taxes on, and loans from, the private sector and returns that wealth to the private sector as profits are made on the provision of the new facilities by supplier companies. Similarly, much of the running cost of the facility is spent with the private sector. Moreover, pension funds – and many of these are for public sector employees – are major players in the provision of private finance. For instance, the Ontario Teachers' Pension Plan has a significant investment in High Speed 1 (OTPP 2011) while the California Public Employees' Retirement System (CalPERS) is also an active infrastructure fund investor (Page et al. 2008).

Any major investment by a public sector agency will change the local economy that provides those services – for instance, a publicly financed hospital will be justified in part by the savings made by closing inefficient and poorly located services and such closures may face local opposition. The history of the NHS has long been one of centralism rather than localism and this is not inherent in the use of private finance rather than public finance. While it is true that discounted cash flow (DCF) techniques were developed for the valuation of stock options and then applied to capital budgeting, the basis of investment appraisal in the public sector is cost-benefit analysis (CBA), which attempts to value non-monetary costs and benefits to provide the income and outgoing flows before a DCF analysis is applied (Partnerships Victoria 2003). Cost-benefit analysis was developed by public sector engineers in France and the US specifically for public sector investment appraisal precisely so that public services (initially flood control) could be delivered effectively. The research presented here fully supports Shaoul's

conclusion (2005) that it is important to 'evaluate public policy decisions in terms of the distribution of resources to different social groups'. Nonetheless, as the discussion of the lighthouse problem by Coase (1974) shows, the public and private are deeply intertwined and we suggest that it is not possible in the contemporary capitalist economy to separate spheres of capital into public and private in a way that neo-classical economists suggest and that 'taxpayers, workforce and patients' are participants in the process, on both the public side, as users of public services, and on the private side, as savers through their pension funds. Moreover, any evaluation of infrastructure investment on the basis of need requires an investment appraisal method for choosing projects. CBA is certainly not without its faults (see Self 1970; Flyvbjerg et al. 2003 for trenchant critiques), but Shaoul does not suggest any alternative investment appraisal method. Those currently working on CBA (Vickerman 2008) are trying to include more social criteria in the investment appraisal. CBA was developed precisely because need should be the criterion for investment in public services, rather than lobbying by relatively powerful interest groups. More research into these issues is certainly needed; but arguably such research should be done without preconceptions about how public services should be financed.

The second set of issues concerns accountability for public expenditure and the argument that the commercial nature of private finance deals threatens accepted standards of public accountability (Asenova and Beck 2010; Forrer et al. 2010). Accountability in the government domain can be broadly divided into the political and managerial (Broadbent and Laughlin 2003). Political accountability is derived from Burke's notion that elected politicians are representatives not delegates and 'deeply answerable' for their actions at the ballot box. Managerial accountability is orientated towards process rather than outcomes; agents are expected to be answerable for their actions directly to principals. This is typically achieved through ensuring transparency in decisions so that those legitimately interested in and responsible for the conduct of public affairs can scrutinise how decisions led to actions. There appear to be two reasons for the diminished public scrutiny of private finance – the first is that commercial confidentiality is a legitimate ground for withholding information from the public and the second is that many SPVs are closed companies with minimal reporting obligations to Companies House (Shaoul et al. 2006).

Under such information constraints, the role of public audit bodies becomes more important. The UK's National Audit Office (NAO) has come under some criticism for its lack of scrutiny of private finance deals (Pollock and Price 2008) and its tendency to legitimate public policy (Broadbent and Laughlin 2003). Nonetheless, it can be argued in the NAO's defence that it has been much more active than other national audit bodies, and that it has at times been publicly forthright, such as when its responsible officer described many value-for-money calculations as 'pseudo-scientific mumbo jumbo where financial modelling takes over from thinking' (*Financial Times* 2002). It also operates on the widely accepted principles that managerial accountability should not trump political accountability and so the NAO should not criticise policy, only the execution of policy, and that it should favour innovation in public affairs. Within these constraints, since 1997 the NAO has produced the most authoritative body of research on the outcome of private finance policy, and this has provided the evidence base for the continual adjustment of policy by HM Treasury (National Audit Office 2009b).

CONCLUDING THOUGHTS

This analysis of the recent research literature on the use of private finance to solve the lighthouse problem over the last 20 years has concluded that additionality can be achieved only in very constrained circumstances where there is a large enough market for direct payment of tolls for the services rendered by the infrastructure. It further suggests that such markets are difficult to identify in developed countries, as shown by the Channel Fixed Link (Anguera 2006) and M6 toll (Campaign for Better Transport 2010) in the UK. Additionality is more likely to be of benefit in developing countries where typically the capital comes from outside the country and the economic stimulus is relatively larger. Value for money is difficult to establish convincingly, owing to the higher costs associated with private finance and the high premium payable for risk transfer, and there are important accountability issues around the commitments made to providers of private finance. As will be shown in Chapter 13 of this report, about the UK, it is difficult to identify any net benefit from using private finance for public infrastructure over anything but the short term.

Does this mean that neo-classical economists were correct, and that Coase's example of Trinity House is merely idiosyncratic? In other words, should public goods be financed only by public finance? The problems here are the constraint on public borrowing due to the need to maintain the confidence of the private sector lenders and the constraint on public income because voters display little appetite for higher taxes. For nearly 30 years, the UK government has been attempting to ease these twin constraints by using private finance. While the use of user-pays concessions was only innovative in the UK context, the development of unitary-charge-funded infrastructure under the rubric of the Private Finance Initiative was an innovation of global importance which has diffused widely. The UK has undoubtedly acquired more infrastructure earlier by using private finance and this has stimulated economic growth. It has led, however, to something of an overhang of debt in the shape of commitments to unitary charges stretching some 30 years into the future and constraints on the flexibility of public bodies in using their infrastructure. It appears that much – but not all – of this investment was a form of pseudo-additionality facilitated by accounting rules and it remains difficult to identify many cases where, with hindsight, value for money was achieved by using private finance. This suggests that private finance tempted the UK into an overinvestment in infrastructure, particularly where that infrastructure was used for welfare such as in health. The search goes on for more appropriate forms of infrastructure funding.

3. Cross-country case analysis

Masamitsu Onishi and Graham Winch

INTRODUCTION

A number of countries are promoting policies to develop infrastructure and, thereby, to provide public services under the name of PPP. Extensive use of the term 'PPP' implies that these countries are expecting potential benefit from a new way of managing and governing organisations that produce public services. Yet history indicates that there has always been some degree of cooperation between the public sector and the private sector (Wettenhall 2003; 2005). In principle, PPP means the greater involvement of the private sector in public service provision with the aim of achieving value for money by making the most of the private sector's resources and by exploiting its incentive towards profit despite its higher cost of capital. In practice, few, among not only policymakers but also academicians, agree on what a PPP actually is (Hodge and Greve 2007). In Chapter 2 the domain of the present research was carefully defined as the private finance of public infrastructure; the issues will be explored below in the variable terms used in the current debates.

Given the recent enthusiasm towards PPP widely observed around the world, it may be conjectured that there exists a shared interest between countries in this area. On the other hand, owing to the broadness of the PPP concept and the social and political context specific to each country, actual implementation practice can vary country by country. Our aim in the study is to identify the commonalities and the differences of PPP concept and implementation around the world. The collection edited by Hodge and Greve (2005) shares a common interest with the research presented here, in that they have tried drawing empirical lessons from the experiences taking place around the world going by the name of PPPs. Hodge and Greve (2005) edited a collection of papers on the experience of PPP in Western countries, reviewing the public welfare implications of PPP, and raising questions about longer-term value for money and democratic accountability. In contrast to their study, this study includes a total of 10 country cases – four from developed countries and six from rapidly developing Asia Pacific countries. As is seen in later chapters, the experiences of developing countries suggest that PPPs there may be different from those in developed countries. All those differences arise from differences in social, economic and political contexts. This study involved a careful examination of such country-specific contexts as they affect the implementation practice of PPPs, including legal framework arrangements, popular project types, and accounting treatment methods. To summarise, this chapter aims at answering the following questions.

- What are the drivers of PPP promotion as a contextual factor of policy development? What are their commonalities and the differences?
- How do the contextual differences influence the shape of PPP policy and implementation from the perspective of government's role and the national institutional framework?
- What are the impacts of accounting treatment on PPP promotion?
- What are the lessons learned from experiences around the world?

The cross-case analysis has been conducted according to the following steps. Firstly, as PPP encompasses too broad a range of concepts and institutional arrangements, it was judged unproductive to cover all classes of PPPs. This study, therefore, focuses on a specific class of PPPs – the private finance of public infrastructure as defined in Chapter 2. Secondly, drivers of PPP introduction and promotion in each country are carefully examined, revealing an interesting distinction between the developed countries and developing countries which is not identified clearly in the existing literature. Thirdly, the relevance of the difference in PPP drivers for policy and institutional development in each country is examined in terms of government's role, typical project schemes, national governance of PPP, accounting treatment and value for money assessment. Finally, the lessons from the problematic or controversial cases are addressed.

VARIETY OF PPP DEFINITIONS AND THE FOCUS OF THIS STUDY

Every country covered in the study was found to have promoted policies related to the concept of PPP, although PPP does not have a rigid definition commonly agreed round the world. Nevertheless, it seems to be common among many countries that the PPP concept broadly encompasses new methods of procuring infrastructures and public services with greater involvement of the private sector.

According to Hodge and Greve (2007), the greatest divide is between those researchers who view PPPs as a tool of governance and those who think it is a 'language game' (Teisman and Klijn 2001; 2002). The former view is rather clear. The latter view means that the language of PPPs is a game designed to 'cloud' other strategies and purposes. Both views of PPPs are relevant to our study. Regarding PPP as a language game would imply that policymakers conveniently use it to blur their true intention and to manipulate their policies in favour of undisclosed objectives. This 'language game' view of PPP necessitates even more careful examination of the performance of PPP implementation based on the empirical studies.

As there is no agreed definition of PPP, the definition below will be used for the purpose of this study. This definition follows the common view of PPP as an organisational and financial arrangement. For analytical purposes, this study focuses upon a specific type among various types of PPP defined by two dimensions. The first dimension is provision of service: who is responsible for provision of the final service to the nation? The second dimension is finance: who provides financial capital to develop infrastructures or public assets? Figure 1.1 in the Introduction (see page 7) shows the field of PPPs defined in this study. Under PPPs, services must be provided by the public

sector in the sense that the public sector is responsible for providing service against national requirements. Of course, the private sector company in effect provides an intermediate service. Even so, under the PPP scheme, the private sector is responsible for providing the intermediate service to the public sector under the PPP agreement with the government, while the final responsibility to the nation for providing public services remains with the government. The private sector's responsibility is clearly defined in the contract between the public and the private sectors.

The other ingredient of the PPP concept focused upon in this study is finance. The specific focus is on the class of infrastructure projects where the whole or part of the financial capital invested in infrastructure comes from the private sector, whether the private sector – at state instigation – provides funds directly for a specific investment (project finance) or funds a portfolio of projects through a strategic partnership or an infrastructure investment bank.

The ultimate purpose of this chapter is to crystallise the nature of private finance for public capital formation through a comparison of 10 country cases. Each country case is seen as a result of a huge-scale experiment of private finance endeavour. The comparative study identifies ideas of 'what we share' and 'where we differ' at a conceptual and implementation level by the buzz word 'PPP'. Thus the comparative study helps us to understand substantial factors for the success of private finance.

There are several names for project scheme types relevant to PPPs: PFI, DBFO (design–build–finance–operate) and BOT (build–operate–transfer), for example. Moreover, a certain name used for a project scheme in one country does not necessarily mean the same when used for a project scheme in another country. For example, the concept of PFI originated from UK. In the UK, PFI designates a specific contractual arrangement between public and private sector players, where the government reimburses the special project vehicle directly through the unitary charge as explored in Chapter 13. A PFI in Japan does not, however, necessarily mean a government-pays scheme such as those in the UK. In Japan, the term PFI is used more generically for a PPP that encompasses various new institutional and contractual arrangements between the public and the private sector.

Even before the term PFI gained popularity around the world, the term BOT had become popular in South East Asian countries for what is called a 'concession' in UK and France, in that users pay the service fee under this scheme.

These examples of variety in terminological definition suggest that simple comparisons of definitions between countries may be useless because the same word could be defined differently from one country to another. Therefore, apart from ad hoc use of those terms, we need a framework that enables different types of institutional and contractual arrangements around the world to be compared. This is why the term 'private finance of public infrastructure' is used in Chapter 2.

PPP DRIVERS: VALUE FOR MONEY OR ADDITIONALITY?

First of all, drivers of PPP introduction and promotion in each country were investigated. Drivers of PPP are a decisive factor for institutional arrangements in each country. One of the findings from the 10 country case studies is the fact that the major PPP driver is a gap between demands for infrastructure developments and governments' ability to fund these developments. In other words, it may be that the recent enthusiasm towards PPP around the world commonly comes from the desire for additionality (as defined in Chapter 2) to the public funding ability. And this proposition is, we suggest, supported by the country cases that follow this chapter. This proposition may be controversial particularly in developed countries such as the UK, France and Japan, where the governments officially claim that the value-for-money benefit justifies use of the PPP.

Developed countries such as the UK, France and Japan have already reached a mature level in infrastructure development and public welfare services. At the same time, they are suffering from a heavy burden of public deficit and so fiscal reform is given top priority as national policy. At the same time, those developed countries are experiencing the emergence of an aging society where tax revenues are expected to decrease and social service expenditures, particularly for the medical and health sector, are expected to increase in the future. The budgetary imbalance eventually leads to a shortage of financial resources that governments can deploy for infrastructure development and public service provision.

Each case from the developed countries exhibits evidence to support the additionality driver for PPP. In the UK, the number of private finance projects is very sensitive to the changes of rules that have an impact on the public sector net debt (PSND) constraint. The number of private finance projects soared when the Ryrie rules that privately financed projects should count against the PSND were fully relaxed in 1992. This does not imply that the value-for-money criteria are irrelevant, but that the main driver has been additionality.

The Japan case shows that the weaker growth trend in the number of private finance projects was observed when the obligation of payment for service provision to a contractor under the contract liability was counted as public debt following the adoption of a new accounting rule for local governments in 2008. The French case also implies that PPPs benefit from a considerable advantage in the context of budgetary constraint, as the Eurostat ESA 95 (European System of Accounts) does not count investments as public sector assets or register them on the public sector balance sheet if the private partner bears the construction risk and either the risk of availability or the risk linked to demand. Thus, the motive for PPP use in developed countries comes principally from a shortage of public funds for infrastructure investment. Nonetheless, voters may not appreciate being charged for public services for which governments have previously borne financial responsibility. For example, tolls for motorways in Britain are not

common, and there is popular resistance to the M6 toll. Another example of such resistance is the case of the Skye Bridge, where the concession scheme failed due to the political pressure against the toll charge for the bridge following devolution of responsibility to the Scottish Parliament. Owing to such political constraints in developed countries, a dominant type of PPP is the one whereby the government pays service fees to the private contractor in the form of a unitary charge.

Although developing countries are as keen as developed countries to promote PPP for additionality reasons, the mechanism by which the funding gap arises in developing countries is different from that in developed countries. Developing countries experiencing rapid economic growth are facing strong needs for infrastructure and public services. Governments in these countries are not, however, able to procure enough finance to meet the demand for such infrastructure through tax impositions, because their national wealth is still at a low level. In countries enjoying a virtuous cycle of investment–growth–more private investment, people believe that investments in infrastructure will generate enough income through national economic development. That is different from the case in many developed countries, where the funding shortage comes from the PSND constraint. It implies a difference in the context of this urgent need for public services between developed countries with a mature level of infrastructure and with a heavy burden of fiscal deficit, and developing countries enjoying higher economic growth.

The clear distinction in the mechanism of a funding gap turns up in different institutional arrangements for private financing for public services. As pointed out above, the dominant scheme in developed countries is the 'government pays' type. By contrast, the dominant scheme in developing countries is the 'user pays' type. As developing countries enjoy higher economic growth rates, it may be much easier to justify investments in infrastructure, even if the government decides to collect user charges. The 'user pays' type of PPP is dominant, therefore, in private financing for public infrastructure in those countries.

As far as the countries covered in the study are concerned, Singapore is the only country where the government is not completely positive about promoting PPP. As was mentioned earlier, given the hypothesis that the motive for PPP promotion arises from the lack of resources in the public sector, Singapore exhibits quite interesting evidence to support the argument that a funding gap in the public sector finances will be a major driver of PPP. For the Singapore government, PPP is not an attractive option for infrastructure development as it has large capital reserves and typically a budget surplus. The need or ability to raise capital is a less pressing concern in Singapore than elsewhere. Although we see some experiences of PPP in Singapore, the use of PPP is of interest for Singapore only as a procurement method for seeking better value for money and, hence, is little used.

The China case also supports the additionality proposition. This additionality driver has an explicit impact on the different attitudes towards promotion of PPP held by the central level of the government and those held at the local level. China is a capital surplus country, but these surpluses are retained at the national level. The local authorities are typically constrained in their ability to raise funds owing to their relative inability to impose taxes and, therefore, they are keener to promote PPP implementations than the central government is. This suggests that what drives local government to open up the infrastructure market to the private sector is the pressure of inadequate fiscal resources.

A similar tendency is observed in Japan as well. Japan exhibits a unique system, similar to the infrastructure fund system, which enables the government to mobilise a huge scale of private capital. The Japanese government owns the postal service company, which also provides postal savings accounts. The postal service company of Japan is one of the largest financial institutions in the world in terms of the amount of capital it holds. As the Japanese government has the authority to decide where the postal deposits are to be invested, it developed the FILP (Fiscal Investment and Loan Programme) for developing national expressway networks and port terminals. A special accounting system was developed for these national expressway and port terminals, which was operated by the government agency. In principle, loans by the FILP have to be recovered by user fees but, in practice, the bond is backed by the government. Therefore, this system is regarded as one of the types of infrastructure fund in the sense that FILP's credit was backed by the government.

Overall, financing ability for infrastructure matters in any country, but how it matters is different in PSND constrained countries and non-PSND constrained countries. This clear distinction is a decisive factor in the shape of PPP implementation practice in each country.

CONTEXTUAL DIFFERENCES AND THE ROLE OF GOVERNMENT

The acquisition of durable assets requires financial capital for initial investment. The relevant questions are:

- Who supplies financial capital for infrastructure investments (method of capital mobilisation)?
- How are the returns on the investment reimbursed to financial capital suppliers (method of reimbursement)?

As discussed in the previous section, there is a clear distinction between developed countries and developing countries which has a contextual impact on financing arrangement for PPPs. Countries experiencing rapid economic growth confront immediate needs for constructing new infrastructure to enjoy further economic growth opportunities. In such countries, 'user pays' projects are predominant. Neo-classical economic theory implies, however, that large-scale initial investment for

public goods is not provided efficiently in the laissez-faire market – see Chapter 2. In addition, the setting of user charges for public services can be politically controversial. PPP projects in developing countries usually require government grant assistance to encourage the private sector to provide infrastructure and utilities, because the cash flow from user fees is generally insufficient to cover the initial investment as the level of fees chargeable to users is politically constrained. A scheme whereby all the capital is provided by the private sector may not be economically feasible. PPPs supported by government grant assistance are called VGF (viability gap funding) schemes in India and Modified BOT schemes in Indonesia.

As well as budgetary grant assistance, there are several forms of governmental financial assistance for the private sector. One form of assistance is the provision of long-term debt to secure financial stability for PPP projects, which typically have long project terms. As such long-term debt is rarely provided by the private financial institutions, many countries have government-affiliated funds or banks that have been established solely for infrastructure developments and public service provisions. There are institutional arrangements in country cases such as the IIF (Indonesia Infrastructure Fund) in Indonesia, and IIFCL (India Infrastructure Finance Company Ltd) in India, which exist to maximise the ability to fund PPPs. Those long-term capital funds play a role in supplying additional liquidity to the private sector as well as in enhancing the credit status of projects. The government provides indirect support through such funds. For example, IIFCL in India enjoys tax exemption for issuing bonds.

The other form of government assistance method in developing countries is the government-affiliated fund established solely for credit enhancement of PPP-type projects, such as IIGF (Indonesia Infrastructure Guarantee Fund) in Indonesia, and KICGF (Korea Infrastructure Credit Guarantee Fund) in South Korea.

Such financial assistance does not necessarily come only from the government. In developing countries, multilateral development banks such as the World Bank and Asian Development Bank play a similar role. The discipline of those players is rather complex as their decisions are influenced by the global diplomatic context. Support can also be given through land acquisition and free use of public land, as in Thailand, which has an impact equivalent to direct financial assistance. All those arrangements are provided as the minimum basis for making PPP projects economically viable.

These government assistance arrangements imply two roles for governments. In financing infrastructure, governments have not only an ability to provide capital for investments (credit supply) but also an ability to bear project risks that could be a source of disincentives to private sector participation (credit enhancement). Developing countries tend to have insufficient liquidity to meet their growing demand for infrastructure. But they have an ability to provide reasonably priced insurance services, at least in comparison with those available in the private market. Guarantee funds observed in South Korea and Indonesia play an important role in providing incentives for private participation in infrastructure projects by taking project risks away from the private sector.

NATIONAL GOVERNANCE FRAMEWORK OF PPP POLICIES

Policy development and improvement

The national governance framework is important as it has a significant impact on PPP policy development. Greater clarity is required in articulating the interest groups at play, the extent of their influence, and the payoffs (Hodge and Greve 2007). A specific single unit is responsible for national PPP policy development in most of the countries other than Thailand and China, though some of them are very new (eg 3PU in Malaysia, formed in 2009). Countries with special organisational units for PPP policy are more likely to adopt a top-down approach for PPPs across government, and experience a need for clearer separation of policy advocacy from the stewardship responsibilities for public funds. Countries that lack such organisational units tend to have a bottom-up approach to PPPs with room for greater local experimentation (Hodge and Greve 2007).

Another important organisational arrangement is an independent unit or agency responsible for evaluating PPP implementations. Such an evaluation unit can play an important role in improving PPP policies. Every country has some kind of auditing unit for government accounts. Countries where such auditors require rigid business cases based on the value-for-money criterion – particularly the PSND constrained countries – are more likely to invest money in the evaluation of PPP policies and implementations. Conversely, countries where the value-for-money criterion is less emphasised are likely to be reluctant to provide resources for assessment works. This is discussed further in the French case in Chapter 5.

Although this research did not investigate directly how much resource was invested in evaluation activities, the richness in both quality and volume of the reports of the National Audit Office (NAO) in the UK is exemplary. As the UK is championing the contemporary private finance model, the NAO plays an important role as a knowledge centre for PPP policy globally and this has influenced private finance policy around the world. Many of the most relevant reports are cited in Chapter 13 on the UK. Nonetheless, evaluation reports can be vulnerable to manipulation to render them consistent with ideological policies. The cases of the UK and Japan show that reports on value-for-money assessment confront persistent critiques arising from this suspicion of manipulation.

Accounting treatment

Given that PPP is an enabler of additionality to public finances, as defined in Chapter 2, accounting treatment is likely to have a greater impact on the attractiveness of PPPs in the PSND-constrained countries because it determines the border between what is on and off the public balance sheet. The evidence from the country cases is that accounting treatment is not a subject of national debate in non-PSND constrained countries.

In European countries, adopting ESA 95 is mandatory. This provides a risk-based criterion for determining whether an asset procured by PPP is on the public balance sheet or not. Investments are not counted as public sector assets or registered on the public sector balance sheet if the private partner bears the construction risks and either the risk of availability or the risk linked to demand. Recent international pressure to adopt the International Financial Reporting Standards (IFRS) brings a more severe control test into the assessment of whether an asset is on or off the balance sheet. Expansion of private finance for public infrastructure started in UK, when the Ryrie rules under which private finance counted against the PSND were abolished. The generally agreed accounting principles (GAAP), which adopt a risk test for inclusion of an asset on a public balance sheet, supported the rapid expansion of private finance after 1992. The UK government's current position seems to be ambivalent by claiming that accounting treatment is not the same as statistical treatment (NAO 2009). It has therefore adopted the IFRS as an accounting treatment rule and ESA 95 as a statistical rule.

The PSND-constrained countries in Asia, such as Japan and South Korea, are confronting a similar dilemma to that faced by European countries. Japan implemented a standardised accounting rule for local governments in 2008 in which a long-term commitment to payment by local governments under PPP is included in the PSND. But the commitment does not necessarily apply to central government and to the government-affiliated organisations such as national university agencies. In addition, whether or not all local governments are implementing the standardised method is uncertain. Overall, lack of clarity in accounting treatment seems to remain in the PSND-constrained countries, which could threaten PPP promotion in the future.

The issue of the accounting treatment of PPP projects is much more relevant in developed countries where a lack of funds for meeting public service demands arises from the pressure towards fiscal reform. In short, whether the government's commitment to long-term payment to the private sector and guarantee for credit enhancement are deemed to be within the PSND or not is a critical factor in determining that government's incentive for employing private finance for public infrastructure provision.

VALUE FOR MONEY ASSESSMENT

The difference between the motives for PPP promotion in developed countries and those in developing countries has a substantial impact on the significance of the value-for-money assessment. In the UK and Japan, the government must assure stakeholders that PPP is the best option for procurement in terms of value for money. The value for money of PPP is defined as the expected reduction of life-cycle cost and the risk transferred. To ensure that PPP is the best option, an assessment of value for money is mandatory in the business case appraisal. Value for money is evaluated by comparing a public sector comparator (PSC) against a private finance alternative (PFA). Because there is no official statement that PPP adoption is allowed in order to relax the PSND constraint, value for money is, in effect, the only official reason for justifying PPP adoption.

Reports of ex-post value-for-money assessment are regarded as suspicious by many professionals in the PSND-constrained countries. In Japan, ex-post evaluation reports of value for money have shown a manifest cost saving on the basis of which the government has claimed the success of PPP for the decade. But there is a persistent view that this cost saving was an effect of abandoning collusive bidding, which had been the traditional business custom of the construction industry in Japan (Reeves 2002). In the UK, NAO reports support the view that PFI is expensive compared with conventional procurement methods in terms of cost of capital, flexibility and transaction costs. Also the critique claiming that the positive reports were generated by the limited group of accounting firms making profit by promoting PPP is persuasive – see Chapter 13 for details. This implies that we need to be careful to understand the validity of auditing reports by allowing for the political background of PPP policy developments.

For the countries where the merit of additionality rather than economic efficiency is regarded as most important, the assessment of value for money is not stressed. For governments of developing countries such as Indonesia, raising sufficient public funds to satisfy the growing demand for infrastructure is not realistic. Therefore, assessments of value for money done in developed countries is not applicable to the developing countries context.

Value for money is not a relevant argument in developing countries because governments are more concerned with meeting the growing demand for infrastructure rather than the efficiency of its construction and operation. Countries that have not developed any guidelines for value for money assessment include China, India, and Indonesia. Although the Malaysian government has defined value for money in PPP, it has yet to come up with a formal and detailed mechanism for determining it. Value for money assessment is an issue in national accountability for public decisions, which is associated with the national political

system. The China case suggests that in a centralised authority regime where national policy is paramount, government officials have a strong influence on the preliminary evaluation process, but civil society, including professionals and academics, does not.

LESSONS LEARNED FROM FAILURE CASES

Dysfunctions of risk transfer

Government participation is almost always essential to make a project economically viable in developing countries, but experience in the country cases shows that risk allocation between the government and the private sector is one of the key factors for the success of PPP projects. Many countries demonstrate poor practice in that the public sector takes on an excessive burden of risk, particularly at the early stage of PPP application. For example, in China, foreign investors would usually request a guarantee of a fixed or at least minimum return, but this guarantee reduces the motivation of these investors to improve operational management. In South Korea's case, although the Minimum Revenue Guarantee (MRG) played a significant role in attracting private capital for infrastructure development, it caused a serious moral hazard problem in the business case. Because the private companies are always subsidised by the government when they make a deficit, competitive bidders base their bids on excessively high demand forecasts in order to make them viable. Eventually, the government's growing financial burden triggered criticism from civic groups, and MRG was abolished in 2006.

Dysfunctions of risk transfer can stem not only from contract arrangements but also from institutional arrangements. In Malaysia's case, the funding of PFI projects comes from the government-owned pension fund and a government-linked bank, suggesting that the Malaysian private sector does not bear any credit risk for projects under the PPP scheme. In reality this is not private finance, but public finance. In China, during the second PPP boom period at the start of the 21st century, the major players in the PPP market were state-owned enterprises which have been criticised for their relatively low operational and managerial efficiency, which largely eliminates the advantages of PPP model (Ke et al. 2009). But in the case of China, state-owned enterprises have a definite advantage against foreign enterprises in that they can handle country-level risks such as political and legal risks.

Table 3.1: Summary of two types of additionality-motivated PPPs around the world

	PSND-constrained countries	**Non-PSND-constrained countries** (with lower capability for public fund raising)
	France Japan UK Korea	Malaysia China Indonesis India Thailand
Maturity of infrastructure development	Developed	Developing
Government credit status	Relatively stronger	Relatively weaker
Economic conditions	Relatively lower growth rate	Relatively higher growth rate
Predominant form of PPP	Unitary charge	User pays
Transparency of appraisal process	Higher	Lower
Sensitivity to accounting treatment	Sensitive	Less sensitive
Application areas	Hospitals, schools, prisons, roads	Roads, water treatment and disposal, electric power
VFM assessment	Likely to be strict	Unlikely to be strict, or ignored

Table 3.1 summarises our review of the country cases so far. Singapore is excluded from the table as it is a non-PSND-constrained country with a high capability for public fund raising. Singapore is purely interested in the value for money benefit of PPPs rather than additionality, but in practice is not at all active in promoting PPPs. We suggest that these two points are linked, as value for money is difficult to identify with private finance. These findings suggest that what is called PPP may not be pure private finance because PPP projects are in effect guaranteed by the government. Although it should be acknowledged that this is somewhat different from the typical private financing model in terms of appropriate risk transfer to the private sector, it cannot be asserted that this scheme is actually not good practice. The fact of the existence of government-backed schemes under the name of PPP itself is symptomatic of the inherent disadvantages of private finance – interest rate premia and transaction costs – and the advantages of public finance as shown in Table 2.1.

Sectors of application

The UK has a wide variety of PPP application sectors, and its experience includes failure cases, which are highly likely to occur in other countries as well. The UK experience shows that the performance of 'government pays' (ie PFI) type PPP varies from sector to sector. One typical case that has been regarded as a failure is that of PPPs for information technology, where the basis of a contract needs to be easy to change owing to rapid technological change. Hospital cases in UK face difficulty in the flexibility of their PPP contracts, which lock the hospitals into relatively high facility management (FM) costs in areas such as building maintenance. In Japan, where a major part of PPP projects are focusing on FM, the opinion is growing that value for money – particularly in terms of cost saving – is rarely achieved because there is less potential for technological innovation in FM than in IT. To summarise, sectors where the contractual basis needs to be easily changed, and the major focus is FM with less technological innovation, conditions are likely to be difficult for PPP.

CONCLUDING THOUGHTS

The country cases, including both developed and developing countries, show that:

- additionality to public-funded investment is the principal motivation for PPP use and it is common to all countries

- whether the government is constrained by the PSND constraint is a decisive factor of the contexts that influence the shape of PPP policy and implementation.

In developed countries where extensive and sophisticated infrastructures are already in place, the growth rate of the economy is typically lower than in developing countries. This implies that the marginal return of investments in infrastructure for the government is relatively less compared with that for developing countries. Even so, infrastructure is still essential for securing the national wealth and vitalising the national economy. In particular, infrastructure development, in the context of growing international competition, is a key component of national strategies for global competitive advantage.

PPP use in the developed countries seems to raise a deep question of infrastructure financing. Every PPP-promoting country around the world has enjoyed the benefit of additionality to public funds. PPP has apparently played a role in expanding the public sector's capacity to raise funds for acquiring public assets. Therefore, the PSND-constrained countries are using PPPs as a 'mega-credit card' with which to pay for infrastructure deals (Hodge and Greve 2007). Just as with a credit card, however, the interest rates have been relatively high and at some point the debts have to be paid off.

Despite the attractions of the additionality benefit, no theoretical foundation to justify PPP use based on this seems to have been proposed so far. Generally, the PSND is politically constrained in order to discipline the public budget. Official acknowledgement of the additionality benefit may cause a dilemma, because once the government admits it, the PSND limit does not make sense. On the other hand, it becomes difficult for national governments to ignore the pressure for IFRS adoption. Global attitudes toward IFRS adoption in the future will have a strong impact on the future attractiveness of private finance schemes in the PSND-constrained countries.

By contrast, the non-PSND constrained countries are enjoying the additionality benefit with less constraint and it does not create controversy, even without rigid justification processes for the use of private finance. Those countries are less likely to implement value-for-money assessment criteria in making comparisons with traditional infrastructure procurement methods. A critical difference from developed countries is that developing countries have difficulty in funding infrastructures in their own right through traditional procurement. Therefore, private finance is the only way to acquire national infrastructure to support economic growth. One of the most significant initiatives common among developing countries is the establishment of special funds for the sole purpose of developing infrastructure. Financial assistance from those government-affiliated funds plays a role in supplying liquidity as well as reducing the credit risk borne by the private sector. It can be called the 'leverage effect' of the governmental fund. Overall, countries enjoying higher economic growth rates will tend to find the use of private finance sustainable because affordability issues will only exist in the short term and so it will remain a key policy of national development.

References

Abdul-Aziz, A.M. (2007), 'Successful Delivery of Public Private Partnerships for Infrastructure Development', *Journal of Construction Engineering and Management,* 133: 918–31.

Akintoye, A. and Beck, M. (eds.) (2009), *Policy, Finance and Management for Public Private Partnerships* (Oxford: Wiley-Blackwell).

Anguera, R. (2006), 'The Channel Tunnel – An Ex Post Economic Evaluation', *Transportation Research Part A,* 40: 291–315.

Asenova, D. and Beck, M. (2010), 'Crucial Silences: When Accountability met PFI and Finance Capital', *Critical Perspectives on Accounting*, 21: 1–13.

Ball, R. Heafey, M. and King, D. (2002), 'The Private Finance Initiative and Public Sector Finance', *Environment and Planning C: Government and Policy,* 20: 57–74.

Blanc-Brude, F., Goldsmith, H. and Välilä, T. (2006), *Ex Ante Construction Costs in the European Road Sector: A Comparison of Public Private Partnerships and Traditional Public Procurement* (Luxembourg: European Investment Bank (EIB)).

Broadbent, J. and Laughlin, R. (2003), 'Control and Legitimation in Government Accountability Processes: The Private Finance Initiative in the UK', *Critical Perspectives on Accounting*, 14: 23–48.

Broadbent, J., Gill, J. and Laughlin, R. (2008), 'Identifying and Controlling Risk: The Problem of Uncertainty in the Private Finance Initiative in the UK's National Health Service', *Critical Perspectives on Accounting*, 19: 40–78.

Campaign for Better Transport (CBT) (2010), *The M6 Toll, Five Years On: Counting the Cost of Congestion Relief* (London).

Coase, R. H. (1974), 'The Lighthouse in Economics', *Journal of Law and Economics,* 17: 76.

Coulson, A. (2008), 'Value for Money in PFI Proposals: A Commentary on the UK Treasury Guidelines for Public Sector Comparators', *Public Administration*, 86: 483–98.

Department of Economic Affairs, Ministry of Finance (India) (2005), *Scheme for Support to Public Private Partnership in Infrastructure,* <http://www.pppinindia.com/pdf/PPPGuidelines.pdf>, accessed 22 May 2010.

Flyvbjerg, B., Bruzelius, N. and Rothengatter, W. (2003), *Megaprojects and Risk: An Anatomy of Ambition* (Cambridge: Cambridge University Press).

Financial Times, 4 June 2010.

Financial Times, 5 June 2002.

Ford, R., and Zussman, D. (1997), *Alternative Service Delivery: Sharing Governance in Canada* (Toronto: Institutes of Public Advministration of Canada).

Forrer, J., Kee, J.A., Newcomer, K.E. and Boyer, E. (2010), 'Public Private Partnerships and the Public Accountability Question', *Public Administration Review*, 70: 475–84.

Freud, D. (2006), *Freud in the City* (London: Bene Factum Publishing).

Froud, J. (2003), 'The Private Finance Initiative: Risk, Uncertainty and the State', *Accounting, Organizations and Society,* 28: 567–89.

Gramlich, E.M. (1994), 'Infrastructure Investment: A Review Essay', *Journal of Economic Literature,* 32: 1176–96.

Gunawansa, A. (2000), 'Legal Implications Concerning Project Financing Initiatives in Developing Countries', *Attorney General's Law Review*, July.

Hall, J. (1998), 'Private Opportunity, Public Benefit', *Fiscal Studies,* 19: 121–40.

Heald, D. (2003), 'Value for Money Tests and Accounting Treatment in PFI Schemes', *Accounting, Auditing & Accountability Journal*, 16 (3): 42–71.

Helm, D., Wardlaw, J. and Caldecott, B. (2009), *Delivering a 21st Century Infrastructure for Britain* (London: Policy Exchange).

HM Treasury (1998), *Partnerships for Prosperity: The Private Finance Initiative* (London).

HM Treasury (2006), *Value for Money Assessment Guidance* (London).

Hodge, G.A. and Greve, C. (eds.) (2005), *The Challenge of Public Private Partnerships: Learning from International Experience* (Cheltenham, UK: Edward Elgar).

—— ——(2007), 'Public Private Partnerships: An International Performance Review', *Public Administration Review,* 67: 545–58.

Infrastructure UK (2010), *National Infrastructure Plan 2010* (London: HM Treasury).

Jenkinson, T. (2003), 'Private Finance', *Oxford Review of Economic Policy*, 19: 323–34.

Ke, Y.J., Zhao, X.B., Wang, Y.Y. and Wang, S.Q. (2009), 'SWOT Analysis of Domestic Private Enterprises in Developing Infrastructure Projects in China', *Journal of Financial Management of Property and Construction,* 14: 152–70.

Keynes, J.M. (1963), *The General Theory of Employment, Interest and Money* (London: Macmillan).

Khadaroo, I. (2008), 'The Actual Evaluation of School PFI Bids for Value for Money in the UK Public Sector', *Critical Perspectives on Accounting*, 19: 1321–45.

Khanom, N.A. (2009), 'Conceptual Issues in Defining Public Private Partnership', paper presented at the Asian Business Research Conference 2009, Dhaka, Bangladesh.

KPMG (2007), *Building for Prosperity: Exploring the Prospects for Public Private Partnerships in Asia Pacific,* <http://www.kpmg.com.sg/publications/Industries_PPPinAsia2007.pdf>, accessed 2 June 2010.

Kwak, Y.H.,Chih, Y.Y. and Ibbs, C.W. (2009), 'Towards a Comprehensive Understanding of Public Private Partnerships for Infrastructure Development', *California Management Review*, 51: 51–78.

MacKenzie, D. (2008), *An Engine, Not a Camera: How Financial Models Shape Markets* (Boston: MIT Press).

Merna, T. and Lamb, D. (2009), 'Application of Risk Analysis in Privately Financed Projects: The Value-for-money Assessment through the Public Sector Comparator and the Private Finance Alternative', in Akintoye and Beck (eds.) (2009), *Policy, Finance and Management for Public Private Partnerships* (Oxford: Wiley-Blackwell).

Ministry of Finance (2004), 'Public Private Partnership Handbook Version 1', <http://app.mof.gov.sg/ppp.aspx>, accessed 1 June 2010.

(NAO) National Audit Office (2009), *Private Finance Projects* (London).

——(2009a), *Performance of PFI Construction* (London).

——(2007), *Improving the PFI Tendering Process* (London).

——(2009b), *Private Finance Projects* (London).

OECD (Organisation for Economic Cooperation and Development) (2006), *Infrastructure to 2030: Telecom, Land Transport, Water and Electricity* (Paris).

OTPP (2011), *Ontario Teachers' Pension Plan* [website], <http://www.otpp.com>, accessed 23 January 2011.

Office of Government Commerce (2010), *Management of Risk – Guidance for Practitioners* (3rd ed.) (London: The Stationery Office).

Page, S.N., Anker, W., Jones, C. and Fetterman, R. (2008), 'The Risks and Rewards of Private Equity in Infrastructure', *Public Works Management and Policy,* 13: 100–13.

Palter, R.N., Walder, J. and Westlake, S. (2008), 'How Investors Can Get More out of Infrastructure', *The McKinsey Quarterly,* February: 1–10.

Partnerships Victoria (2003), *Public Sector Comparator: Supplementary Technical Note* (East Melbourne: Partnerships Victoria).

Pollock, A. and Price, D. (2008), 'Has the NAO Audited Risk Transfer in Operational Private Finance Initiative Schemes?', *Public Money and Management,* 28: 173–8.

Raisbeck, P., Duffield, C. and Xu, M. (2010), 'Comparative Performance of PPPs and Traditional Procurement in Australia', *Construction Management and Economics,* 28: 345–59.

Ramirez, R. (1999), 'Value Co-production: Intellectual Origins and Implications for Practice and Research', *Strategic Management Journal,* 20: 49–65.

Reeves, K. (2002), 'Construction Business Systems in Japan: General Contractors and Subcontractors', *Building Research and Information,* 30: 413–24.

Savas, E. (2000), *Privatisation and Public Private Partnerships*(New York: Chatham House Publishers).

Self, P. (1970), '"Nonsense on Stilts": Cost-benefit Analysis and the Roskill Commission', *Political Quarterly*, 41: 249–60.

Shaoul, J. (2005), 'A Critical Financial Analysis of the Private Finance Initiative: Selecting a Financing Methods or Allocating Economic Wealth?', *Critical Perspectives on Accounting*, 16: 441–71.

——, (2009), 'Using the Private Sector to Finance Capital Expenditure: The Financial Realities', in Akintoye and Beck (eds.) (2009), *Policy, Finance and Management for Public Private Partnerships* (Oxford: Wiley-Blackwell).

Shaoul, J., Stafford, A. and Stapleton, P. (2006), 'Highway Robbery? A Financial Analysis of Design, Build, Finance and Operate (DBFO)', *UK Roads Transport Reviews,* 26: 257–74.

——, ——, —— (2008), 'The Cost of Using Private Finance to Build, Finance and Operate Hospitals', *Public Money and Management*, 28: 101–8.

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

Teisman, G. and Klijn, E.H. (2001), 'Public Private Partnerships in the European Union: Official Suspect, Embraced in Daily Practice', in Osborne, S. (ed.), *Public Private Partnerships: Theory and Practice in International Perspective* (New York: Routledge).

——, —— (2002), 'Partnership Arrangements: Governmental Rhetoric or Governance Scheme?', *Public Administration Review,* 62: 197–205.

Vickerman, R.W. (2008), 'Cost-benefit Analysis and the Wider Economic Benefits from Megaprojects', in Priemus, H., Flyvbjerg, B. and van Wee, B. (2008), *Decision making on Mega projects: Cost Benefit Analysis, Planning and Innovation* (Cheltenham: Edward Elgar).

Wettenhall. R. (2003), 'The Rhetoric and Reality of Public Private Partnerships', *Public Organisation Review: A Global Journal,* 3: 77–107.

—— (2005), 'The Public-Private Interface: Surveying the History', in Hodge and Greve (eds.), *The Challenge of Public Private Partnerships: Learning from International Experience* (Cheltenham, UK: Edward Elgar).

Winch, G.M. (2010), *Managing Construction Projects* (2nd ed.) (Oxford: Wiley–Blackwell).

Part 2: Country case studies

4.	**Public private partnership implementation in China** ShouQing Wang, Tsinghua University, Beijing, Yongjian Ke, National University of Singapore, Jing Xie, Tsinghua University, Beijing.	29
5.	**The challenges of implementing new forms of PPP in France** Elisabeth Campagnac, Ecole des Pont Paristech, Translated by Sandra Schmidt and Graham Winch	37
6.	**Public private partnerships in India: recent policy initiatives and investment trends** Gautam Ray, Kyoto University	45
7.	**Public private partnership in Indonesia: Is infrastructure development in Indonesia shifting towards a decreasing role for government?** Pradono Wishnu, Bagoes Oka and Diandra K. Pratami, Institute Technology of Bandung	55
8.	**Current status and perspective of private finance in Japan** Masamitsu Onishi and Kiyoshi Kobayashi, Kyoto University	67
9.	**Understanding Malaysia's public private partnership** Khairuddin Abdul Rashid, International Islamic University, Malaysia	75
10.	**The use of the public private partnership concept in Singapore** Asanga Gunawansa, National University of Singapore	90
11.	**Current status and perspectives of public private partnership for infrastructure projects in South Korea** Myungsik Do, Hanbat National University, Hyeon Park, Korea Development Institute	99
12.	**Review of public private partnership implementation in Thailand** Veerasak Likhitruangsilp, Chulalongkorn University	109
13.	**30 Years of private finance in the United Kingdom** Graham M. Winch, Manchester Business School	117

4. Public private partnership implementation in China

ShouQing Wang, Tsinghua University, Beijing; Yongjian Ke, National University of Singapore; Jing Xie, Tsinghua University, Beijing.

INTRODUCTION

China's experience with adopting the privately financed procurement of public service facilities originated in the urbanisation process and the tremendous economic growth that created the huge demand for infrastructure such as roads, ports and power generation facilities. At the same time, supplementary investment from the private sector was encouraged because of the government's budget concern. Public private partnership (PPP) implementation is driven by demand in this fast-developing country but there is a lack of clear regulatory definitions, a legislative framework and value-for-money (VFM) evaluation systems.

THE NATIONAL DEBATE ON PPP

Generally speaking, PPP is identified as an innovative tool for financing major infrastructure projects and has a huge potential for the future. PPP financing models, attracting foreign and private capital in the development of infrastructure facilities, are welcome by the Chinese government, especially by local government. PPP is not, however, a panacea or a 'quick fix' solution for delivering project financing and realisation. The debate lies in whether the adoption of PPP would authorise private investors to charge a premium for providing a public service that used to be free under traditional procurement methods (Wang 2006). PPP projects often require extensive expertise input, have high preliminary cost, and require lengthy deal negotiation, which may not offer a good return to all parties and, as a result, the deal may not materialise in the beginning or may fail in the end (Chan et al. 2010). Private sector consortia may not be experienced enough and financially capable of taking up the infrastructure projects owing to a lack of relevant skills and experience (Ke et al. 2009a). More importantly, the adoption of PPP has put the legislative framework under pressure. In China, the PPP regulatory system, including cost auditing, tariff regulation, and definition of scope of responsibility and remit of relevant regulatory agencies, has not been set up in time. This has led to a great deal of resistance from the conservative wing of the government and has slowed down some of the key reform projects (Zhang 2009).

THE RELATIONSHIP BETWEEN PRIVATISATION POLICY AND PPP

The Chinese government has adopted piecemeal and multiple approaches to privatising its state-owned enterprises, such as privatisation by share issue, sales to outsiders, joint ventures with foreign firms, and management buy outs (Guo et al. 2008). Privatisation started in the 1980s at local government level, even though it was not officially encouraged by the central government at that time. Large-scale privatisation began in the 1990s, when many state-owned enterprises were deeply in debt. The Chinese Communist Party's 15th Congress in 1997 gave a green light to privatising state-owned enterprises nationwide; local governments were granted ownership of state-owned enterprises and were allowed to sell these assets (Gan 2009). Privatisation is usually carried out as part of the reform of state-owned enterprises or assets with the objective of improving their productivity and efficiency. In the construction and operation of infrastructure, private participation is allowed and encouraged in order to reduce pressure on the government's budget but there is no literature, to the best of the authors' knowledge, that shows that the Chinese government has privatised any infrastructure project. Since the legal and institutional framework for privatisation and PPP are only partially in place (Guo et al. 2008; Ke et al. 2009a) and, more importantly, since these two reform methods have been introduced with different objectives and in different areas, there is only limited a relationship between privatisation and PPP policies.

FOREIGN INFLUENCE ON THE NATIONAL DEBATE

The first boom phase of private participation in infrastructure development in China began in the 1990s. Foreign investors were the major players during this period and they usually charged higher fees and preferred operating projects in the more developed regions of China. Therefore, in the 1990s, even in the state-approved pilot build-operate-transfer (BOT) projects such as the Laibin B power plant, the Chinese government took over too many risks owing to the lack of BOT experience (Wang and Ke 2009). Most foreign investors would usually request a guarantee of a fixed or even minimum return. This guarantee would reduce the motivation for foreign investors to improve the operational management. To solve this problem the General Office of the State Council issued, on 24 October 2002, the 'Notice on Relevant Issues Concerning the Appropriate Handling of the Existing Projects Guaranteeing the Fixed Return of Investments by Foreign Parties'. Thereafter, existing projects with an agreed fixed rate of return from local government were forced to be handled by modifying relevant contracts, selling shares to local government, transferring projects back to local government or even terminating contracts taking into account the particulars of the project concerned (Wang 2006). In these cases, the Chinese government was accused of breaking its written promise in the concession agreements. This experience during the first phase of PPP in China led foreign investors to lose confidence in the Chinese government. Domestic state-owned enterprises are now the principal players in the second boom phase of PPP in China which began at the start of the 21st century.

HISTORY OF PPP EVOLUTION

As mentioned above, the PPP approach was adopted to relieve the pressure on the government's budget for infrastructure development. It was first introduced, for example, in the Shajiao B power plant, and developed by local governments in the mid-1980s around the same time as the privatisation process began. After 1996, several state-approved pilot BOT projects were awarded in order to promote BOT on a larger scale, such as the Laibin B power project and the Chengdu No. 6 water project. Since then, the involvement of private investors in infrastructure

development has shown dynamic growth. At the end of the 1990s, responding to the adverse influence of the Asia financial crisis, the central government invested large amounts of treasury bonds in infrastructure projects, and was determined to clean up the unregulated or illegal projects that had led to the end of the first phase of the private investment boom (Shen et al. 2005). During the turn of the 21st century, infrastructure shortages limited economic growth and at the same time imposed great budgetary pressure on the Chinese government. As a result, the second boom phase of private investment has appeared to participate in infrastructure development.

Apart from the change in the key players in the provision of PPP as explained earlier, the major change in the evolution of PPP from the first to the second phase was the improvement of the PPP legal framework. The Chinese government's current view is that it should encourage and support private investors to participate in infrastructure development and public service supply, to promulgate progressively a number of regulations for private investment in public utilities, to adopt international contractual practices and to work out an equitable risk-sharing scheme (Ke et al. 2009a).

Table 4.1 lists the documents issued by the central government for promoting and guiding the private investment through PPP. These reflect several improvements with regard to PPP implementation, in enlarging the group of PPP key players from solely foreigners to all investors, widening the PPP implementation concession from the previous BOT model, and providing more operation procedures. In particular, the 'Several Opinions of the State Council on Encouraging and Guiding the Healthy Development of Private Investment' issued in May 2010 further widened the scope for private investment, including railway, water conservancy, petroleum gas, telecommunication, land control, exploration and development of mineral resources, national defence and technology industries, policy-related housing, medical and health industries, and education and welfare services. Private enterprises are also allowed to establish financial institutions and participate in the reform of state-owned enterprises. These new Opinions will no doubt further promote the use of PPP.

Nonetheless, the opinions, notices and decisions listed in Table 4.1 are considered to lack a strong legal force, which may be a potential risk where they conflict with existing laws and regulations such as those regarding public land ownership. Some of the earlier documents issued by the State Council and various ministries take into account mainly their own responsibilities and are therefore incomplete. Furthermore, a myriad of regulatory procedures and charges at municipal, provincial and national levels affect the promotion of PPP, especially during swings in macroeconomic control measures. The State Development and Reform Commission (SDRC) completed a feasibility study on PPP legislation in May 2008 and drafted PPP legislation in infrastructure development, taking into account previous PPP practices. The draft legislation was submitted in May 2010 (State Development and Reform Commission 2010).

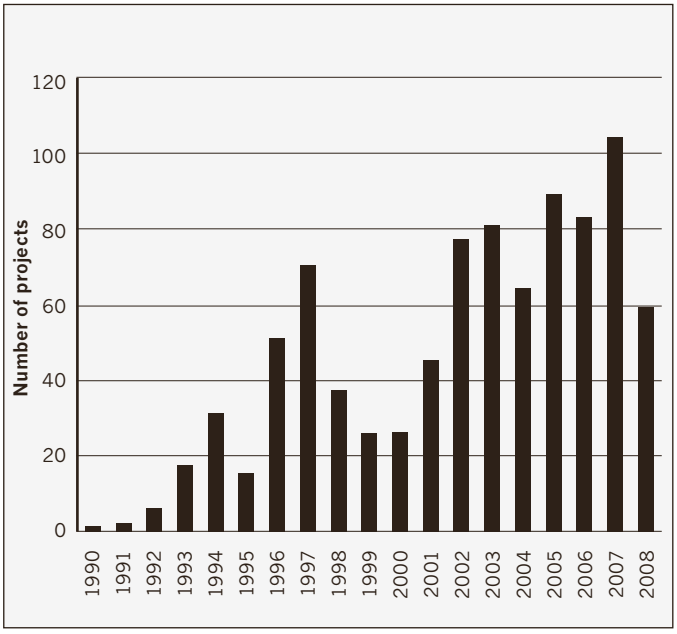
Table 4.1: Central government documents related to PPPs in China

Year	Document title
1994	Local administrative measures on the concession of municipal public utilities in Huherhaote and Hainan
1995	Circular concerning the issues of absorbing foreign investment through BOT
1995	Circular concerning the issues of the approval and administration of experimental foreign-invested concession projects
2000	Temporary provisions of the Ministry of Construction on utilizing foreign capital in municipality public utilities
2001	Several opinions of the State Development and Reform Commission concerning the promotion and guidance of private investment
2001	Local administrative measures on the concession of municipal public utilities in Jilin and Dalian
2002	Notice of the General Office of the State Council on the relevant issues concerning the appropriate handling of the existing projects guaranteeing the fixed return from investments by foreign parties
2002	Opinions of the Ministry of Construction on accelerating the marketization of urban utilities
2003	Local administrative measures on the concession of municipal public utilities in Beijing, Jiangsu, Sichuan, Hebei, Chengdu, etc
2004	Administrative measures on the concession of municipal public utilities
2004	Decision of the state council on reforming the investment system
2004	Sample document for the franchised operation of urban water supply, gas supply and waste disposal
2004	Local administrative measures on the concession of municipal public utilities in Ji'nan, Guizhou, Shanxi, Xuzhou, etc
2005	Several opinions of the State Council on encouraging, supporting and guiding the development of individual and private economy and other non-public sectors of the economy
2005	Local administrative measures on the concession of municipal public utilities in Tianjin, Dongguan, Gansu, Qingdao, Xinjiang, etc.
2006	Sample document for the franchised operation of urban heat supply and waste-water disposal
2006	Local administrative measures on the concession of municipal public utilities in Hu'nan, Shanxi, Hefei, Wuhan, Shenzhen, Beijing, etc.
2007	Local administrative measures on the concession of municipal public utilities in Shanghai (draft)
2008	Research reports of PPP legislation in infrastructure development
2010	Draft of PPP legislation by SDRC (unpublished)
2010	Several opinions of the State Council on encouraging and guiding the healthy development of private investment

INSTITUTIONS AND CAPABILITY OF THE PPP MARKET

Figure 4.1 illustrates the numbers of PPP projects each year in China according to the World Bank PFI database and clearly shows the two booming phases of private investment in Chinese infrastructure projects. China's infrastructure market has been opened to private investors except for some special sectors such as important railways, ports and airports. The greatest opportunities have been seen in toll roads and municipal utilities, including water, power, environment and city gas. The investment responsibility for the sectors with the greatest opportunities are undertaken by local governments while the central government is responsible for key railway projects and other special sectors. This observation shows that the local government level is more suited to promoting PPP implementation than is central government. The most important incentive for local governments to open the infrastructure market to private investors is the pressure of inadequate fiscal resources (Chan et al. 2009).

Figure 4.1: Private investment in infrastructure development in China (World Bank 2009)



There are three typical potential players in the PPP market: foreign enterprises, state-owned or holding enterprises, and domestic private enterprises. As mentioned earlier, foreign investors, the major players during the first phase, usually charged more than domestic investors and preferred operating projects in more developed regions, while state-owned enterprises, as the principle players during the second phase, had relatively low operation and management efficiency, which largely restrained the advantages of the PPP model (Ke et al. 2009b). Foreign enterprises may be the more efficient in operation and management but are the least familiar with Chinese culture. State-owned enterprises have the strongest relationship with the government and the best understanding of political and legal risks. At present, state-owned and state-holding enterprises have the major market share in most infrastructure sectors, such as water, solid waste disposal, city gas, toll roads, power, urban railways, intercity railways, ports and airports, while domestic private enterprises and foreign investors are only active in certain sectors but with smaller market share, such as water, city gas, and toll roads, which have appreciable revenues.

There are a few domestic enterprises that have ventured into foreign countries via the PPP model. The first BOT project implemented by a Chinese enterprise was a power plant contract signed in the early 2000s in Cambodia which has not, however, been very successful from the lender's viewpoint. The first BOT project implemented by a Chinese enterprise in a foreign country and regarded as successful was a power plant contract in Indonesia signed in 2003. In recent years, more and more Chinese enterprises have become interested in venturing into foreign infrastructure development through PPP. For example, some state-owned companies are preparing to tender for overseas high-speed railway projects and one company was awarded a project in Laos in 2010. There is still a long way to go for Chinese enterprises to be successful in PPP infrastructure development in foreign countries, in particular because they have not gained sufficient expertise and experience in doing such projects in countries where the legal, financial, social, and culture systems are totally different from those in China.

Although there is no specific government programme to support PPP activities, the Chinese government has issued related regulations on promoting private investment and improving conditions in the financial market. On 9 November 2008, the Chinese government announced a relaxation of credit conditions, a reduction in taxes and the start of a massive infrastructure spending programme, in a wide-ranging effort to offset adverse global economic conditions by boosting domestic demand (Chinese Government 2008). Out of the 4 trillion RMB stimulus plan as announced by the Chinese government, only 1.18 trillion RMB was to come from central government and the rest would have to be topped up by either city governments and/or the private sector (State Development and Reform Commission 2009). This might provide a great opportunity for private investment as most local governments still suffer from severe budget pressure, especially as the central government is now trying to cool down the overheated real estate sector, which will further reduce the local government's income from selling land.

EMERGING MODELS

There are significant differences between the PPP business models in different sectors because of financial self-liquidating ratios, operating processes and other project characteristics.

In the water sector, the difference between sewage treatment and water supply is the financial self-liquidating ratio of projects. The total cost of a sewage treatment plant

cannot be covered by the waste-water tariff collected, but the tariff for water supply would usually be able to offer an appreciable return to the investors. Therefore, most water supply plants in China adopt the model of so-called 'Plant-pipeline bundle' which means that the water companies collect a tariff from end-users. Local governments usually procure the sewage treatment plants by means of BOT or transfer-operate-transfer (TOT), and leave investment in and operation of the waste-water pipeline network to the government. Sewage treatment companies usually collect fees from local governments according to their treatment volume, irrespective of how much the government charges the end-users of waste-water treatments.

BOT is the most popular model for toll roads, where private investors directly collect the tariff from users. This 'user pays' mechanism means that operators of toll roads in China carry the risk of traffic volume and of toll revenue. The tariff is regulated by the provincial authority for road transportation and should be adjusted according to the operation cost. In most past cases, however, there has been a failure to adjust the tariff according to the concession agreement (Zhang 2009). There are also many projects in which the returns of investment are unreasonably high owing to unfair concession agreements signed by local governments. As a result, the central government decided in June 2011 to investigate all toll road projects and regulate, if necessary, unreasonable concessions. In addition, joint ventures between public and private sectors are rarely observed in toll road projects.

In the railway sector, the most critical issues are the lower project financial self-liquidating ratio and unclear subsidiary and profit mechanisms. These issues make private participation much more difficult, except in the case of some dedicated lines with independent tariff settlements. The Ministry of Railways unlike other ministries has avoided the popular reform. The railway sector is the least open to private investors. The same difficulties have been seen in urban railway development. Huge investment requirements and the imposition of low fares owing to public welfare concerns greatly reduce the possibility for private investors to obtain a reasonable financial return from the construction and operation of railways. Some pilot projects, such as the Beijing Metro Line 4 and Shenzhen Metro Line 4, have encountered troubles and the city governments have had to subsidise them with a large sum of money, even though Hong Kong MTR Company's expertise has been introduced. Under current Chinese land law, local governments are not allowed to grant the land around subway stations to the investors without competitive tendering. Hence, the integration of land use and transportation development could not be achieved. This should have provided a large amount of floor space to support a higher intensity of urban activities and in turn increased the ridership of the transit railways. More importantly, the integration could also have allowed the investors to gain profit from real estate development so as to compensate partially for the construction cost.

In light of the current legal framework, two common business models are adopted, i.e. 'subsidise in build-operate-transfer' (SBOT) and 'build-subsidise in operation-transfer' (BSOT). In a SBOT project, the government would be responsible for subsidising the construction work, while in a BSOT project, the government would provide a subsidy during the operation period. The key to these two solutions is the improvement of the financial self-liquidating ratio by the government by undertaking part of the cost or providing part of the revenue.

Municipal solid waste treatment is a sector without a polluter-pays system or is just about to introduce a polluter-pays system in China, and thus it relies traditionally on governmental fiscal input. For the private investment procurement, a BOT model is usually adopted. As with waste-water treatment plants, project companies obtain their service tariff from local governments rather than from end-users. This means investors in a solid waste treatment plant find it easier to collect fees but may face directly the default risk of local governments.

The revenue of a city gas project consists of the connection charge and commodity charge, where the connection charge is applicable when a user applies for access to the pipeline network, and the commodity tariff means the price of gas throughput on the transmission network. The connection charge was first introduced in Guangdong at the end of 2006 (Zhang 2009) but its legality is controversial. Nonetheless, given the lack of governmental fiscal support for the construction of a pipeline network, it may be reasonable and necessary to charge for connection.

RELEVANT ORGANIZATIONS FOR NATIONAL PPP GOVERNANCE

As presented in Table 4.1, the State Council, State Development and Reform Commission (SDRC) and the Ministry of Housing and Urban-Rural Development (MoHURD) (formerly the Ministry of Construction) have issued several regulations and related documents on PPP. Provincial governments have also issued some guidance. There is no organisation at national level in China specifically responsible for PPP projects, such as Partnerships UK or the National Council for Public Private Partnerships in the US. Most PPP projects are usually managed at provincial or municipal level, provided that they follow sector ministries' guidelines or regulations. To explain the different government agencies involved in a PPP project, the following section takes the Chengdu No. 6 Water Plant as an example to illustrate the approval and registration processes. For more detailed information on the government agencies involved in the Chengdu No. 6 Water Plant, please refer to Chen (2009).

The Chengdu No. 6 Water Plant is a pilot BOT project promoted by central government and, thus, has received attention and strong support from the central government from the very beginning. The State Planning Commission (now the SDRC) and the State Administrative Bureau of Foreign Exchange provided letters of support. Chengdu Municipal Government (CMG) strongly supported the

project and took on the responsibility for obtaining the required approvals from the central government before the bidding stage. A BOT Coordinating Committee, made up of officials from different bureaus and departments from the CMG, was established to assist with coordinating the acquisition of the approvals as presented in Table 4.2. It took the CMG around one year to advance the project to the invitation for bidding stage. This was considered to be very fast by China's standard (Chen 2009).

The complexity of the approvals systems in China for a PPP project could be significantly simplified and accelerated if a 'one-window' system were adopted (United Nations Industrial Development Organization 1996).

PUBLIC ACCOUNTABILITY

Despite the frequent use of PPP in China, guidance for assessing value for money has not been developed. This may be mainly because China is still transforming from a planned economy to a market economy and government officials care more about the need to develop infrastructure than about the efficiency of its development and operation.

As China is a country with a centralised authority, its political system could be another key factor affecting the preliminary evaluation process. Government officials make their decision mainly on the basis of their own judgements or preferences and civil society, including professionals or academics, has almost no say on the final decisions.

Consequently, although feasibility studies and evaluations of PPP projects are conducted, information relevant to appraisals, project details and post-implementation issues is not publicised usually. This kind of information is regarded as commercially sensitive by the company, or as official secrets by the government, which makes the evaluation of PPP and especially quantitative research more difficult.

Table 4.2: Main approval processes for the Chengdu No. 6 Water Plant Project

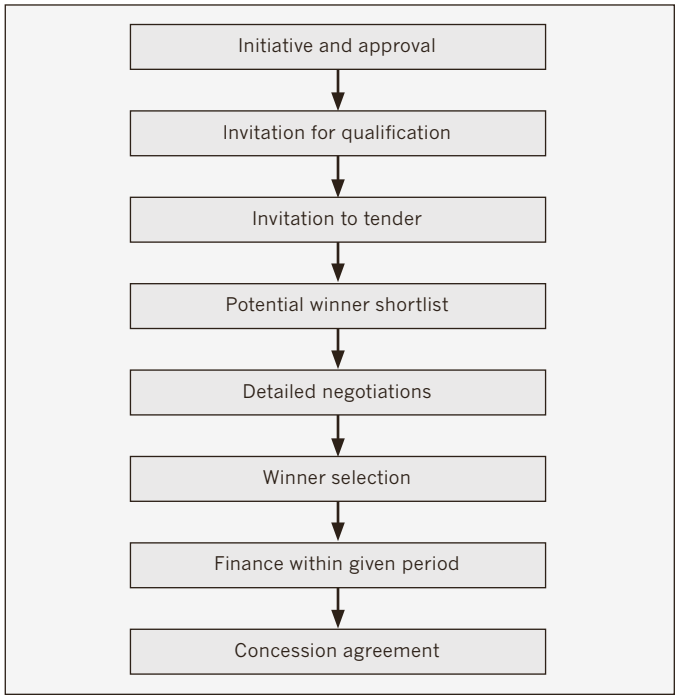
No.	Approval	Approval authority
1	**Approvals for establishment and operation of the project company**	
1.1	Approval for project company establishment	Chengdu Foreign Trade and Economic Cooperation
1.2	Pre-registration of project company	State Administration of Industries and Commerce
1.3	Business-opening registration and operating licence	State Administration of Industries and Commerce
1.4	Foreign exchange registration	Chengdu Branch of State Administration of Foreign Exchange (SAFE)
1.5	Taxation registration	Local Taxation Administration
1.6	Fiscal registration	Local Fiscal Administration
1.7	Customs registration	Customs
1.8	Approvals on labour administration	Labour Administration of Chengdu
2	**Approvals for project financing**	
2.1	Approvals of financial agreements	State Development and Reform Commission, SAFE and Ministry of Foreign Trade and Economic Cooperation
2.2	Foreign debt registration	Chengdu Branch of SAFE
2.3	Registration for foreign security	Chengdu Branch of SAFE
2.4	Registration of mortgage raised on water plant facilities	Chengdu Administration of Property, Chengdu Land Use Authority, and Chengdu Administration of Industries and Commerce
2.5	Audition and approval of loan repayment	Chengdu Branch of SAFE

Source: Chen 2009.

PROCUREMENT PROCEDURE

Several PPP guidance documents have been issued by MoHURD and local governments as shown in Table 4.1. According to these guidelines, such as Clause 8 in 'Administrative Measures on the Concession of Municipal Public Utilities' by MoHURD, a public bidding process is required for selection of a private investor. A typical procurement procedure is shown in Figure 4.2.

Figure 4.2: Typical bidding procedure for selection of PPP investors



The current Tendering and Bidding Law in China is incompatible with the nature of PPP procurement of infrastructure. Procurement of PPP projects differs from that of engineering and construction works as the former in most cases comprise financing and long-term operation in addition to engineering and construction works while the latter is confined to engineering and construction works only. Several contradictions exist, therefore, between the bidding procedure for PPP projects and the Tendering and Bidding Law, and these contradictions constitute potential obstacles to PPP projects. For instance, according to the Tendering and Bidding Law, the investors are not allowed to negotiate with the government on key issues such as the tender price. There is a requirement for at least three potential bidders, which may not be appropriate for infrastructure sectors such as urban railways. Practices in mainland China indicate that infrastructure PPP projects should adopt some more appropriate competitive procedures for the selection of private investors (Zhang 2009). For PPP models with a high degree of standardisation, such as the 'build-transfer' (BT) and 'operate &maintenance' (O&M) schemes adopted in projects with high financial attractiveness, an open competitive bidding would be appropriate. For PPP models with a lower degree of standardisation such as the joint venture arrangements used in projects with lower financial attractiveness, a direct bid offer or a competitive negotiation would be more suitable.

At present, there are two types of administrative arrangement commonly used for PPP project bidding. The first one is to set up a separate tendering office formed of officials and professionals. The rules and regulations related to the tender process are formulated jointly by relevant government departments, that is, the Construction Commission, Planning Commission, Fiscal and Auditing Bureau, Industrial and Commercial Administration Bureau, and other relevant departments, with the Construction Commission representative as the leader of this office. The second one is to employ a qualified (registered) tendering agency and entrust it with the whole process. Evaluation criteria normally fall into price and non-price factors as pre-set in the invitation to tender. Taking the Laibin B Power Plant project (Wang and Ke 2009) for instance, a two-part set of evaluation criteria were used as follows: an electricity tariff (60% weight in the evaluation) and financing proposal, technical proposal and operation, maintenance and transferral (OMT) proposal (40% weight in the evaluation). In the evaluation, of the 40% total weight of the latter group, the financing proposal accounts for 60%, while the technical proposal and OMT proposal account for only 20% each.

CONTRACT

The MoHURD issued three sets of PPP contract samples for municipal water supply, pipeline gas and solid waste projects in 2004, and another two sets of contract samples for municipal waste-water treatment and heat supply projects in 2006. These contract samples may assist local governments who are not familiar with PPP in negotiating and signing contracts with private investors. Nonetheless, they are considered to be unfair since most risks are transferred to the private partner. For example, according to the contract sample, the project company of a waste-water treatment project is required to submit guarantees for the whole project lifecycle, including a tender guarantee to safeguard its responsibility in the bidding, a performance guarantee to ensure that the construction will be completed in time, and a maintenance guarantee to secure favourable operation. The proposed guarantee system will reduce the risk for local government but impose great financial pressure on the investors and reduce the attractiveness of the project to private partners.

It is worth noting that these contract samples list some project output indicators that would facilitate the government's monitoring of the project performance. But the MoHURD failed to provide corresponding quantitative values for these indicators. Instead, each ministry has its own industry-specific standards. For example, the Ministry of Health has developed the health standards for the water sector. For the private investor, this means accepting the risk that industry regulations may change, whereupon the private sector partner could be forced to upgrade the facilities during the operation period.

FINANCIAL PROCUREMENT

Various equity providers may be involved for normal structured PPP projects. There will usually be a 'special purpose vehicle', ie a project company whose equity is contributed by one or more investors. The project company then borrows money mainly from commercial banks who will compete with each other for the leading arranging role (Managed Lead Arranger) to arrange the debt. Due diligence and the negotiation process with the consortium will begin in order to agree the debt amount, repayment structure, interest margin, syndication fee, etc.

Domestic banks have great liquidity and low borrowing cost, and are thought to be the best option. Hence, they are in fact the main debt provider for domestic PPP projects. International banks are considered more expensive and often have more concerns. They find it difficult to take the leading role in domestic PPP project financing activities, and yet are usually approached by companies 'going abroad'. Even so, loans from ADB or the World Bank have also been seen in some of the local PPP projects such as the Chengdu No. 6 Water Plant.

CONCLUSIONS

China's fast economic growth has resulted in huge demand for infrastructure development. PPP was implemented in China during two booming phases in the 1990s and the 2000s owing to the government's budget concern. The key players in the first phase were foreign investors, while in the second phase local investors dominated, especially state-owned or holding enterprises. PPP has been mainly implemented in China in the road, water and power sectors and has been expanded gradually to solid waste, gas, rail and public services. There are different PPP models in China but BOT has been most prevalent, especially in the 1990s. PPP implementation in China has experienced some difficulties owing to the lack of PPP expertise and the inadequate national-level legal framework and regulations in the 1990s. Since then, several ministries and about 20 local governments at provincial or municipal level have issued relevant regulations or policies but there is still no national-level legislative framework and no national level organisation specifically dealing with PPP, presenting legal uncertainty and approval risks, etc, to investors. Although PPP has been successfully implemented in many projects in different sectors, there is still much room for improvement, especially in the project evaluation, procurement and decision-making processes, public accountability, financial market and the fair risk-sharing mechanisms in the concession agreement, such as tariff adjustment.

REFERENCES

Chan, A.P.C,, Lam, P.T.I., Chan, D.W.M., Cheung, E. and Ke, Y.J. (2009), 'Drivers for Adopting Public Private Partnerships – Empirical Comparison between China and Hong Kong Special Administrative Region', *Journal of Construction Engineering and Management*, 135 (11): 1115–24.

——————————— (2010), 'Potential Obstacles to Successful Implementation of Public Private Partnerships in Beijing and the Hong Kong Special Administrative Region', *Journal of Management in Engineering*, 26 (1): 30–40.

Chen, C. (2009), 'Can the Pilot BOT Project Provide a Template for Future Projects? A Case Study of the Chengdu No. 6 Water Plant B Project', *International Journal of Project Management*, 27 (6): 573–83.

Chinese Government (2008), 'China's 4 Trillion Yuan stimulus to Boost the Economy and Domestic Demand', <http://www.gov.cn/english/>, accessed on 25 November 2008.

Gan, J. (2009), 'Privatization in China: Experiences and Lessons', in Barth, J. et al. (eds), *China's Emerging Financial Markets: Challenges and Opportunities*, 581–92.

Guo, Y., Gan, J. and Xu, C.G. (2008), 'A Nationwide Survey of Privatized Firms in China', *Seoul Journal of Economics*, 21 (2): 311–31.

Ke, Y.J., Wang, S.Q. and Chan, A.P.C. (2009a), 'Public Private Partnerships in China's Infrastructure Development: Lessons Learnt', *Proceedings, Changing Roles: New Roles, New Challenges*, Noordwijk ann Zee, Netherlands, 5–9 October: 177–88.

Ke, Y.J., Zhao, X.B, Wang, Y.Y. and Wang S.Q (2009b), 'SWOT Analysis of Domestic Private Enterprises in Developing Infrastructure Projects in China', *Journal of Financial Management of Property and Construction*, 14 (2): 152–70.

Shen, J.Y., Wang, S.Q. and Qiang, M.S. (2005), 'Political Risks and Sovereign Risks in Chinese BOT/PPP Projects: A Case Study' (in Chinese), *Chinese Businessman: Investment and Finance*, 1: 50–5.

State Development and Reform Commission (SDRC) (2009), 'The 4 Trillion RMB Stimulus Plan' (in Chinese), <http://www.ndrc.gov.cn/xwfb/t20090309_265095.htm>, accessed 13 May 2009.

—— (2010), 'Draft Legislation for Concession in Urban Infrastructure prepared by SDRC' (in Chinese), <http://fgs.ndrc.gov.cn/wqfxx /t20100530_350154.htm>, accessed 1 July 2010.

United Nations Industrial Development Organization (1996), *Guidelines for Infrastructure Development Through Build-Operate-Transfer (BOT) Projects* (Vienna).

Wang, S.Q. (2006), 'Lessons Learnt from the PPP Practices in China', Keynote Speech, Asian Infrastructure Congress, Hong Kong.

—— and Ke, Y.J. (2009), 'Laibin B Power Project – the First State-Approved BOT Project in China', in *Public Private Partnerships in Infrastructure Development – Case Studies from Asia and Europe* (Weimar: Bauhaus-Universität Weimar), 101–29.

World Bank (2009), Private Participation in Infrastructure (PPI) Project Database – Easy-to-use graphs 18 December 2009, <http://ppi.worldbank.org/features/Archive/ppi_Archive.aspx?SectionID=3>, accessed 15 August 2009.

Zhang, L. (2009), 'Development of Infrastructure Sectors in China: Status Quo and Trends', seminar presentation, The University of Hong Kong, 28 February.

5. The challenges of implementing new forms of PPP in France

Elisabeth Campagnac, Ecole des Ponts Paristech, Translated by Sandra Schmidt and Graham Winch

INTRODUCTION

The current status of Partenariats Publics Privées (PPP) in France is paradoxical. On the one hand, France has for a long time used traditional forms of private finance such as concession and délégation de service public (DSP) (Bezançon 2004); on the other hand, new forms of private finance closer to the British model of the Private Finance Initiative (PFI) are being implemented in France but more slowly and with difficulty. These new forms of private finance are, in particular, embodied in the contrat de partenariat (CP) created in 2004 and later modified by legislation in 2008. The CP was preceded by a whole variety of sector-specific contractual forms. All these contractual forms (or all the most recent ones) conferred on a private consortium the complete responsibility for financing, designing, construction and exploitation of a building and its associated services by means of a payment by the public authority for the whole period of the amortisation of the private investment. These are global contracts of long duration with private financing but public payment. They are also incentive contracts, the remuneration of the private partners being subject to their achieving performance objectives.

Nevertheless, by September 2010, six years after the launch of the CP, only 73 contracts had been signed – 56 by local authorities for a total €1.5 billion and 17 by central government for a total of €1.75 billion. The majority of the contracts were worth under €30m although, according to the experts, the minimum necessary investment for this type of contract to be viable is €50m. The CP has not, therefore, yet attained the success predicted by its promoters.

The reserve demonstrated by public clients and then, after the economic crisis, by the private operators, contrasts with the much wider use of concessions and DSPs. This contrast between old and new forms of PPP is characteristic of the French situation and demands attention along three main lines of enquiry.

First is the heterogeneity of the contractual forms that can be grouped under the generic term of PPP. It seems sensible to distinguish them because they are based on different conceptions of both the relations between public authorities and private operators, and the contractual engagements that bind them. This enquiry, therefore, focuses on the legal reasons for the feeble development of CP in France.

Second is the changing context in which these new contractual forms are located and the nature of the public policies that promote them. Reference to the specificities of the national context and its positioning in the international context is important. In the French context, it indeed seems as if the movement towards new forms of private finance is related less to the logic of privatisation than to the logic of the financialisation of public procurement. One of the consequences of financialisation is a profound challenge to public law. This enquiry therefore focuses on the economic and financial reasons for the limited development of CP in France.

Finally, lessons can be drawn from the first experiences of PPP, in particular the role of evaluation in the development of new forms of contract.

NEW FORMS OF PPP AND THE LEGAL DIMENSION: FROM LEGALITY TO LEGITIMACY

The first obstacle that promoters of PPPs face in implementing the new CP contract is that there were no equivalent legal contracts for public procurement before 2004. Prior to this, public procurement was dominated by conventional methods and DSP, which includes concessions and affermage (a leasing arrangement).

DSP is currently defined by a law of 2001 and involves the granting of a contract to a private operator to supply a public service and to charge users directly for that service – an example is the supply of mains water. The aim of DSP is the management of the public service itself in the form of the final service to the consumer. This is distinct from the CP, which is not concerned with final services but intermediary services – usually called 'facilities'. This leaves it open for the public authority to choose to delegate the final service or to deliver in-house.

The concession is one form of DSP in which a public authority – the concessor – delegates the contract to finance public infrastructure to a private concessionaire. Concessionaires are then reimbursed by the users. This type of arrangement is very well established in France in the form of the infrastructure concession, which has been used since the 17th century for roads, canals, and bridges. The public service concession appeared at the beginning of the 20th century. Traditionally, the concession was considered to be an ad hoc contract which was not aligned with standard forms of public procurement.

A public procurement contract is a contract made to meet the public authority's needs. One of the main principles of procurement contracts is that of the separation of the various services required by the public authority – for instance a separation of construction and maintenance contracts. Each project has to be submitted to formal competition in a competitive tender or through other authorised procurement routes, such as the one authorised under the new European code in 2006 – competitive dialogue. Payment for the services procured is by the public authority and it is not allowed to delay the payment, which has to be made during execution of the contract. This is the main difference from DSP and concessions, where users pay.

So, until the 2004 order there was no intermediate contract between the DSP and the public procurement contract. These existing legal categories differ from the new forms of finance in CP on some crucial points, such as their objectives, modes of payment, the risk allocation regime, the principle of separation between the different services and the forbidding of the postponement of payment. Thus, the missing piece in the legal framework for private finance concerned arrangements for complex,

global, long-term contracts with public payments spread through the life of the contract.

A similar type of contract had been attempted towards the end of the 1980s in the form of Marché Public d'Entreprise Travaux Publics (METP). Some authorities argue that this has influenced CP, but after its widespread use for projects such as secondary schools, when central government delegated responsibility for these to the regions, they were banned in the mid 1990s. This was partly for political and partly for legal reasons. The Conseil d'Etat (the Council of State, the supreme public law court) continually requalified the contracts and forbade the principle of postponed payment for services. So the METP approach, which was similar to that which had triumphed in the UK, created an atmosphere of legal uncertainty around this type of contract.

IN SEARCH OF LEGALITY

The concept of private finance progressed after 2002 under the influence of many factors, such as the end of the cohabitation government in the elections of May 2002, which meant that the same party now had both the presidency and a majority in parliament; the development of European regulation; and the reform of the budgetary law. At first, particular sectoral measures were taken in the areas of domestic national security, justice, and defence acquisition. All these laws covered real estate and facility management for central government services.

Beyond these sectoral measures, the government and parliament searched for a more general tool or mechanism that could be used by both central and local government, as happens in many other countries. With this in mind, legislation in 2003 gave general authorisation to the government to issue orders (ordonnances) about the measures required to create new types of global, long-term private finance contracts. To date, two of these have been promulgated – one in the field of health, called the Baux Emphytheotiques Hospitaliers (BEH), and a general one formalising the Contrat de Partenariat. With the latter, private finance received, for the first time, a legal and functional definition.

MISSING LEGITIMACY: CONTRACT DEROGATION

Private finance thereby gained a legal basis, but without winning the necessary political, professional or institutional legitimacy.

Politically, the contract is still the subject of much debate. On the one hand, it is acclaimed for all the advantages it is supposed to bring: budgetary savings, better maintenance, more regular facility management, higher quality of services and better cost control. On the other, it is decried as a budgetary trick with the risk of much more onerous obligations at the end of the day. It is also decried as a contract that externalises some activities that contribute to public services and as one that threatens employment in the public sector. In fact, on this last point, the public authorities are likely to take care with the tasks externalised under CP, which are likely to be dominated by building maintenance rather than soft services.

Concern about a lack of legitimacy is also widespread among the professions. The fears come first from the architects, who worry that the transfer of the client functions on the project (maîtrise d'ouvrage) to the private sector operator places design under the constraints of private interests and that this will be manifest itself in poor-quality architecture. Small and medium-sized enterprises also fear that the very onerous requirements placed on those wanting to bid for global contracts create barriers to entry which will prevent them from competing, and that this will profit the large corporations.

Institutionally, there is also little consensus. In its decision in 2003, the Constitutional Council judged that the principles of private finance defined in law, on which the government relied for its CP order, seriously infringed the current legislation for public procurement. The global character of the contract is opposed to the public procurement law of 1985 (loi MOP Maîtrise d'Ouvrage Public), which governs the relationship between the public client, and the architects and engineers responsible for design, client advice, and the control of the project (Maître d'Œuvre) – see Campagnac (2000) for a discussion of this legislation. This law forbids the client from renouncing its responsibilities for the project in matters such as design and finance. So, the position of the Constitutional Council is that CP contracts have to be restricted to situations where their use can be based on general arguments, such as urgency, in the event that delay would cause significant problems, or complexity, where the public client does not have the capability to establish the financial and legal arrangements.

In other words, the CP contract is legal only if there is a derogation from normal procurement law. The consequence of this is to introduce into the procurement process a special preliminary step intended to justify the use of CP on the grounds of either urgency or complexity. According to the grounds selected, the procurement approach alters; it is only in the case of complexity that the process leads to 'competitive dialogue' under the EU procurement directives.

The criteria for interpretation remain a source of legal uncertainty, particularly after an Orléans administrative court judgment in 2008 cancelled the first CP contract to be concluded. This was to build and operate a secondary school in Villemandeur (Loiret), signed in July 2006 between the Département and Sogea Construction. Its cancellation was motivated by the argument that the delay was due to the shortcomings of the public authority in managing the school project, which implies a very strict test of urgency. This decision caused trauma in the professions and reinforced the sense of legal uncertainty in the use of CP.

CHANGES IN CONTEXT AND PUBLIC POLICY

The victory of the new President of the Republic in 2007 initiated a change of context for PPPs. Shortly after his election, Nicholas Sarkozy, in effect, relaunched the PPP policy, which he judged too timid. These changes worked in two phases:

- the normalisation of the CP in the judicial landscape taking into account the reforms introduced in 2008
- the attempt to make its use more widespread by presenting it as a means of generating growth at a time of crisis.

These two developments were accompanied by a redefinition of the debates, in which the financial and budgetary dimensions associated with this type of contract became more important than the judicial ones.

VALUE FOR MONEY AS A CRITERION FOR ELIGIBILITY

The first task was to include the CP within the normal arrangements of public procurement, and this was undertaken in 2008. Prior to the passing of this law, earlier legislation, introduced in 2007, had tried to revise the 2004 rules. In particular, it tried to relax the urgency criterion, to make the use of private finance more secure legally, and to ensure fiscal neutrality between the different forms of private finance and the different modes of public procurement. This also meant that the PPP would be exempt from some taxes that the public client does not normally pay.

Nonetheless, it is the integration of the value-for-money criterion that is the main issue for the future regulation of PPPs, and was the object of the reforms contained in the law proposed in 2008. It proposed two main changes:

- It added a third criterion in the preliminary appraisal of an advantageous balance compared with normal public procurement, giving more emphasis to the economic analysis.
- It created a presumption of urgency for some sectors until the end of 2012, which meant they would not have to provide their reasons for using private finance.

The law was referred to the Constitutional Council by the socialist (opposition) members of parliament. In its decision the Council agreed the third (value-for-money) criterion but refused the urgency presumption because it limited the necessary preliminary appraisal and limited judicial control over the nature of the claimed urgency. In conclusion, it declared the suppression of the urgency criterion to be unconstitutional on the grounds that it violated constitutional requirements such as equity, protection of the public domain, and good use of public money. Nevertheless, the acceptance of the third criterion opened the way for the wider use of private finance on the economic criterion of value-for-money.

PPPS IN THE ECONOMIC CRISIS

The economic crisis that erupted in 2007 gave private finance a new role, that of being a means to reflate the economy more generally. The President of the Republic announced an economic stimulus in December 2008 aimed at creating employment. A counter-cyclical role is expected from investments in railways, fluvial and maritime works, and urban transport, as well as the universities and research centres, all aimed at sustaining economic activity and employment. From this perspective, private finance in its various forms (including concessions) can accelerate investment for community benefit and allow sharing of risks between the public and private sectors.

To date, government support for PPPs has had three main elements:

- a budget for state guarantees of €10 billion
- a budget for long-term loans of €8 billion drawn on funds managed by the public savings bank, the Caisse de Dépôts
- a new law passed in 2009 to accelerate construction programmes generally as well as public and private investments, including several measures to reduce the difficulties private interests face in signing public PPPs in the current financial context. The law, therefore, allows a proportion of the funding to come from the public sector, although not from within the special purpose vehicle (SPV) that embodies the PPP. This allows private companies to receive the same subsidies as publicly owned ones under the 1985 procurement law.

Another current initiative is the 'great loan' launched by the President in December 2009 on the basis of a report by two leading government figures. This loan is expected to be for €35 billion, with €22 billion leveraged from the financial markets. There are plans to invest €60 billion, in total, in four priority sectors: higher education and research (with additional funding for the university estates development programme *Plan Campus*), industry and SMEs, renewable energy, and the digital economy.

THE SHIFT OF THE DEBATE TOWARDS ECONOMIC AND FINANCIAL CRITERIA

The mobilisation of CP for economic reflation has changed the possible obstacles. The legal obstacles are now less important, while those associated with financial issues have a growing importance. Projects launched using private finance have both to assure budget availability and to respond to the increased demands of finding finance capital in a time of crisis.

On the first point, PPPs benefit from a considerable asset in the context of budgetary constraint because Eurostat – the European statistics office responsible for national budgets – does not requite debt to be on the public sector

account if the risks are divided between the parties in certain ways. Thus, the investments are not counted as public sector assets or registered on the public sector balance sheet if the private partner bears the construction risk and either the risk of availability or the risk linked to demand. The rationale of Eurostat is to take into account the risk analysis and the party that takes responsibility for it. If those risks are taken by the private partner then the arrangement will be off-balance sheet; if on the other hand, those risks are taken by the public partner, then they will be counted on its balance sheet. The main issue in the treatment of the different arrangements is to determine whether the partnership contract is on the public balance sheet or not. One of the sources of interest in private finance for public authorities is whether it allows the equivalent debt to avoid being taken into account on the Maastrict criteria.

The crisis imposes another constraint on the public authorities in the form of the heightened requirements of the financiers. In effect, the socioeconomic return on infrastructure projects is reduced, thanks to greater uncertainty in expected demand, greater costs of mobilising their own funds, reinforced prudential constraints, and greater aversion to long-term engagements. The crisis of liquidity translates into a diminution of syndicated offers and a reduction in the number of suppliers. Projects find it even more difficult to raise finance, because the margins required by the private operators are at a higher level today than before the crisis.

The debates on the use of CPs as a tool for reflating the economy have not, however, found a consensus among experts. For instance, according to Paul Lignères (a lawyer associated with Linklaters) the proposed legislation of 2007 and the government plan to support infrastructure projects are really effective because they increase the level of trust in the private markets, as is shown by some projects that have succeeded in being financed at this new juncture (tram/train in La Réunion, which was abandoned in June 2010; the Charles de Gaulle airport express; LGV Tours-Bordeaux). Paul Ligneres does not hesitate to speak of a 'dazzling success' in this area.

This view is not shared by François Lichère (Professor of Law at Aix Marseille University and consultant for lawyers in the practice of writing PPP contracts). For him, PPP is designed to run during favourable economic conditions because the financial risk is borne by SPVs, which borrow 90% of their funds. The measures included in the 2007 legislation have simply allowed the relaunch of earlier projects such as the Vincennes Zoo, which had been blocked since 2006, rather than initiating new ones. Such reservations are shared by some bankers, who have observed that the only projects delivered during 2009 were prisons, which have been criticised for their functionality and quality. For the moment, though, there is no attempt to step back and to assess the 'real' efficacy of PPPs in terms of investment and operation costs.

THE PPP MARKET IN FRANCE: A LIMITED, SEGMENTED AND HETEROGENEOUS MARKET

It is observable, first, that the change in public policy has not really changed the situation. The PPP market, and even more that for the CP, remains a relatively limited market. In January 2008, PPPs under negotiation or confirmed by the Mission d'Appui aux Partneriats Public-Privé (MAPP – part of the Ministry of Finance) represented a total investment of around €10 billion for the hospital sector and €0.6 billion for the prison sector. By September 2010, only 74 CPs, strictly defined, had been signed and delivered or were in the process of delivery. This is also a market that is highly segmented by the type of client (central or local government), by sectoral domain of activity, by form of contract deployed, or by governance structure.

Taking the type of client first, although local authorities had signed 56 contracts, three-quarters of the total, central government leads on the total value of contracts signed, with €1.75 billion across 17 contracts against €1.5 billion for all local authority projects. Turning to sectors of activity by total investment by central government, these are spread across the principal ministry domains – 46% for health; 14% for justice (courts and prisons); 12% for youth and sports; 9% for infrastructure; and around 4% for defence. The distribution is very different for local government where, by number of contracts, 48% are for urban infrastructure (mainly street lighting and road maintenance); 19% for information systems and telecommunications infrastructure, 3% each for cultural and sporting facilities, energy, and waste treatment, and only 1% for transportation and housing.

Thus, the market is limited and segmented: PPPs also constitute a very heterogeneous market whether by size of project or the diversity of the contractual arrangements that the projects can use. PPPs can be used as much for small projects – such as the refurbishment of a school or the modernising of a town's lighting – as for more financially consequential projects such as the Lille Stadium. The smallest project is for the public lighting of Auvers-sur-Oise, which was the first contract signed by a local authority. According to the Director-General of Services for the town, the use of the CP has allowed the town to bring half its public lighting up to the required standards in a schedule of eight months while spreading the payment over six years. The largest project financially is promoted by the French Canals Authority (Voies Navigables de France) for the construction of the Seine-Nord Europe canal connecting Le Havre to the Benelux canal network and the Rhine. PPPs are also used for the buildings for major government projects, such as administrative centres, barracks, prisons and hospitals, as well as major infrastructure projects. They are also used for urban networks and energy projects, such as street lighting and district heating by local authorities.

In general, regional governments (the middle tier of French government) have not been attracted by the new CP. There

are diverse reasons for this, including the scepticism of certain elected representatives about the necessity for using CPs, the possibility of using alternative solutions and, in particular, the existence of financially attractive offers from the Caisse des Dépôts.

This heterogeneity is reinforced by the diversity of contractual forms, which vary from one sector to the other. Certain PPPs do not take the form of CPs; rather, they use forms such as BEH for hospitals or Autorisations d'Occupation Temporaire (leases with or without the option to purchase), as in the case of a number of police barracks. Thus, for hospitals, the majority of projects have taken the form of BEH, for instance in Caen, Annemasse-Bonneville, Metz, Arras and Evreux. On the other hand, a number of projects, such as in Perigueux, Angouleme, and Ales, have used the CP, particularly for old peoples' homes and energy centres but only eight CPs had been signed in the health sector by the end of 2008.

For major projects, CP is in competition with the well-established concession. Public authorities may also prefer DSP. Lille chose a CP for its stadiums, while Le Mans used DSP. Reims chose CP for tramways while Mulhouse preferred DSP. Moreover, among the current PPP projects, only a small number have achieved a signed contract. For example, of 135 potential projects identified by the end of 2007, and for which calls for tender had been published in the Official Journal of the European Union, 25 have actually signed contracts, and half are in the process of being awarded. Almost three years later, in the summer of 2010, there were 383 projects in total, of which 73 were signed or in the course of delivery, 95 were in the process of award, and 215 in the process of feasibility studies, including preliminary evaluation.

THE GREAT WEAKNESS OF EX-POST EVALUATION IN FRANCE

The second observation is that it is very difficult to obtain a synthetic view of the eventual benefits or challenges of PPPs. There is a severe lack of ex-post evaluation. The types of report produced in the UK by the National Audit Office do not exist in France. The Cour des Comptes has been able to analyse the experience of this or that sector during the last few years so as to criticise the additional costs of PPP, as it did in its 2008 Annual Report with regard to two specific PPPs – the Information Centre of the Ministry of the Interior and the Centre for Diplomatic Archives of the Ministry of Foreign Affairs. It also announced its reservations during the scrutiny of the draft legislation on PPP. Thus, it has been able to denounce the additional constraints on the national budget in the future through the commitment of public expenditures to repay inviolable credit obligations. Nonetheless, the Cour has not yet developed a considered overall analysis of the subject.

The evaluation reports are typically different in France from those in the Anglophone countries. The early institutionalisation in the US or, in a different way, in the UK, Canada, Australia, and New Zealand, contrasts with the situation in France. The institutionalisation of evaluation proves to be difficult in France, with a history of failures (Perret 2001). Today, however, it is on the agenda in the context of administrative reform and the new public management. To explain this tardiness different arguments have been advanced about the intrinsic weaknesses of evaluation methodologies (Nioche and Poinsard 1984); their heterogeneity, and their feeble impact on public policy (Trosa and Perret 1992); or even the incompatibility between the spirit of evaluation and the 'state sciences' such as those that have been developed in France that are linked with the training of the public corps of engineers, economists, inspectors participating in the production of knowledge; and the incompatibility of the mode of selection of elites and an openness to evaluation (Leca 1993). The first report of the Mission d'Evaluation et Contrôle (which has similar value-for-money responsibilities to the UK NAO) argued that those countries where evaluation finds an echo and a legitimacy are those where the 'political culture' gives great weight to the interests of taxpayers. This is not the case in France owing to the structure of the relatively 'painless' fiscal system, which rests largely on indirect taxes (Perret 2001). All the same, the countries with an interest in evaluation are also those that grant a weak legitimacy to state intervention and those that demand proof of the effectiveness of the state's actions.

SPECIFICS OF PRELIMINARY EVALUATION: BETWEEN ECONOMIC RATIONALITY AND LEGITIMATION

The introduction in 2004 of a process of preliminary evaluation in the CP displays more of the approach of new public management. It involves, in effect, the preliminary justification of the decision to resort to this new contract by comparing it with other tools for public procurement. In France, this exercise has for some time displayed a specific requirement for assuring the eligibility of the project against the judicial criteria of urgency or complexity imposed by the Constitutional Court in 2003. It is once this juridical step is taken that a proper comparative analysis can be undertaken to ensure the greatest economic efficiency of the CP in comparison with traditional public procurement.

It was only with legislation in 2008 that the economic issues in the preliminary evaluation took over from the juridical issues. At the same time, the CP moved from having the status of a derogation outside statute to forming part of the normal statutes of administrative law. The comparative analysis now forms a decisive phase of the evaluation. It rests on the total cost, the allocation of risks, and the financial model. It presumes the identification of the accounting, budgetary and fiscal aspects through a number of possible processes – the identification of the economic parameters of the proposed operation; the identification and mitigation of the risks, and comparative financial simulations. The sophistication of the processes necessitates that the public authority be assisted by a financial consultant in order to be able to develop the risk matrix and the financial clauses of the project contract, and to aid it in the analysis of the financial structure and the budgetary situation.

Certain authors have emphasised that public clients have displayed a concern to move beyond a tool that is too exclusively financial and to seek to integrate criteria of socio-economic utility that are used, for example, as the basis of public decision-making for infrastructure (Bougrain et al. 2005). Preliminary evaluation does not, however, avoid the risk that during the comparative evaluation the choice of contract serves as a justification for itself through the logic included in the methods of evaluation.

THE CENTRAL ROLE OF MINISTERIAL AGENCIES IN THE PROCESS OF EVALUATION

The fourth observation is that there are central government agencies that act as task forces and have responsibility for the design of the framework and methods of evaluation. The Mission d'appui aux PPP (MAPP 2011) has published an Operational Guide for PPP (Bergère 2007). MAPP occupies a central place in the preliminary evaluations – it is the principal organisational expert – and was created in 2004 to develop the CP. Originally, its principal mission was to provide help for local governments engaged in the preparation of CPs, and the use of MAPP was not obligatory, but it is now obligatory for all the projects launched by central government and by national corporations. MAPP is also the origin of the modelling tool for cost and risk for the comparative analysis between CP and conventional procurement governed by the MOP law of 1985. MAPP also intervenes at the end of the contract award process with the Directorate of the Budget before the CP is signed, working jointly to understand its impact on the public finances and the sustainability of the budget. Finally, MAPP is responsible for analysing the feedback on experience with the CP in order to be able to propose developments in the regulations. This expert organisation can be said to be both judge and jury in the process of preliminary evaluation because it is involved in the design, production and use of evaluation methods, as well as receiving feedback on the CP.

MAPP occupies a cross-sectoral role in the process of evaluation; other expert organisations have also been created with more sectoral responsibilities – whether under the Ministry of Justice in the form of the Agence publique pour l'immobilier de la justice (APIJ 2011); or under the Ministry of Health with the Mission d'Appui á l'investissement Hospitalier (MAINH 2011). This organisation, in particular, was responsible in 2005 for developing a methodology guide for the BEH. We need also to mention l'Institut de la gestion Déléguée (IGD 2011), which is a not-for-profit foundation created in 1996. It is an independent think tank and its objective is to promote the quality and efficiency of public services. In fact it is very close to the Corps des Ponts et Chaussées (Claude Martinand, vice president of the Corps is IGD president) and to the Ministry of Construction and Transport. It works on construction, transport and urban services. The difference between the IGD and the other organisations is that it is not responsible for feedback.

THE FIRST FEEDBACK FROM EXPERIENCE

The feedback is essentially that made by the various expert organisations, public and sectoral, already mentioned. In France, more general and synthetic evaluation reports on the results achieved by the first PPPs are not available. Taking the example of the MAINH in the health sector, two series of lessons can be drawn. The first refers to the learning gained during the first wave of PPP projects, essentially those using BEH. The second refers to the actual experience in the health domain in relation to PPPs. The balance sheet of the first evaluations appears to be mixed (Berehouc 2009).

For the first wave of feedback, a dozen projects have been analysed in detail by the MAINH (cf the review in Campagnac 2009a). They involved two logistics projects, six hospital and accommodation building projects, and two major projects. These are representative of the first wave of PPPs launched in 2003 and 2004 and signed in 2005 and 2006. They all benefited from public spending forecasts in Plan Hôpital 2007. The evaluation focuses on the competitive dialogue process.

The balance sheet is neither black nor white and shows, moreover, a process of learning. For the projects realised under the auspices of Plan Hôpital 2007, the client had developed a prescriptive approach rather than one orientated towards performance objectives. The client had difficulty in rejecting modifications to the project after the selection of preferred bidder. Within the private sector there was little innovation and a market with little competition dominated by the large construction corporations.

This first assessment also identified the restricted range of maintenance services that have been outsourced. All the private sector partners criticised this range, which varied during the competitive dialogue process owing to both an underestimation of costs earlier in the process and the perception by the client of the rather standardised and uninnovative offers from the private sector, which lacked experience in the hospital sector. The consequences of this narrow range are significant because the economics of any contract overall will be strongly linked to the range of maintenance and operational services offered.

If the perception of the architectural quality associated with PPPs remains positive in the hospital sector, this is not the case for other projects. One fact is very much confirmed – the higher costs of PPPs. This reflects both the inclusion of new elements in the economic appraisal, such as costs of maintenance and refurbishment, which are generally little known in the hospital sector, and a more structural factor linked to the higher rates of interest applicable to private finance. In the long term, the financial structure of PPPs risks being a threat to the solvency of hospital establishments. This explains the current pause in the launching of PPPs in the hospital sector until more complete results are available from the analysis of the second wave of feedback.

CONCLUSIONS

To conclude, PPPs in France are situated at a crossroads between national specificities and growing insertion in the international economy. The effects of both these factors on the forms of regulation (here understood in the sense of the definition of the rules of the game) contribute each in their own fashion to explaining why the use of new PPPs remains limited in France. In a very schematic manner, we can argue that the national specificities manifest themselves at the level of the regulation of public procurement (and the production of goods and services) while the international influences have more effect on the regulation of the management of public debt and of financial flows.

The case of France is also interesting because even if it does not have a monopoly on the engagement of the state in the promotion of PPPs it is, perhaps, one of the countries that allows us to focus most clearly on the nature of the transformations in progress. It is the historical use of traditional forms of PPP in France that allows us to identify the changes brought by the new contemporary forms. The new PPPs are, in effect, the fruits of the management of public debt in a more internationalised economy. Public debt permits providers of capital to live from the state precisely because of this debt, so it is important to pay attention to transformations in the law. The conditions for the implementation of new PPPs in France, in particular the Contrat de Parteneriat, show that one of the necessary criteria has been the progressive abandonment of administrative law, which has notably permitted the legal development of the concession and DSP, in favour of a more subjective law of contract. The PPPs highlight the manner in which French administrative law moves closer to the law of commercial contract business in removing one by one all the checks and balances that assure the maintenance of administrative law. It also shows the manner in which the public debt, managed as a system of rights and credits, is orientated towards the much greater financialisation of public procurement. From the perspective of the state, the new PPPs in France translate as a combination of the principles of the new public management as they have been defined in France (Campagnac 2009b) and this tendency towards financialisation.

Thus the analysis of CP and its mechanisms of development or blockage opened up a new field of research.

REFERENCES

APIJ (Agence publique pour l'immobilier de la justice) (2011), website <www.apij.justice.fr/APIJ_WEB/FR/accueil.htm>, accessed 11 November 2011.

Bezançon, X. (2004), *2000 ans d'histoire du Partenariat Public Privé* (Paris: Presses de l'Ecole Nationale des Ponts et Chaussées).

Berehouc, C. (2009), 'Gestion de la commande publique et qualité du service', in Campagnac E. (ed.) (2009a), *Evaluer les partenariats public-prive en Europe* (Paris: Presses de l'Ecole Nationale des Ponts et Chaussées), 135–46.

Bergère F. (2007), *Guide opérationnel des PPP* (Paris: Editions du Moniteur)

Bougrain F. Carassus, J. Colombard-Prout, M. (2005), *Partenariat public-privé en Europe : quels enseignements pour la France: retour d'expériences du Royaume-Uni, d'Italie, du Danemark et de France* (Paris: Presses de l'Ecole Nationale des Ponts et Chaussées.

Campagnac, E. (2000), 'The Contracting System in the French Construction Industry: Actors and Institutions', *Building Research and Information*, 2 (28): 131–40.

–– ––(ed.) (2009a), Evaluer les partenariats public-prive en Europe (Paris: Presses de l'Ecole Nationale des Ponts et Chaussées).

–– –– (2009b), 'Contribution á l'analyse des contrats de partenariat public privé en France et au Royaume Uni', *Revue Française d'Administration Publique*, 130: 365–82.

IGD (l'Institut de la gestion Déléguée) (2011), website <http://www.fondation-igd.org>, accessed 11 November 2011.

Leca, J. (1993), 'L'evaluation dans la modernisation de l'Etat', *Revue Politiques et Management Public,* 11.

MAINH (Mission d'Appui á l'investissement Hospitalier) (2011), website <http://mainh.sante.gouv.fr>, accessed 11 November 2011.

MAPP (The Mission d'appui aux PPP) (2011), website <http://www.ppp.bercy.gouv.fr/mission.php>, accessed 11 November 2011.

Nioche, J.P. and Poinsard, R. (1984), *L'évaluation des politiques publiques* (Paris: Economica).

Perret, B. (2001), L'évaluation des politiques publiques (Paris: La Découverte).

Trosa, S. and Perret, B. (1992), *L'évaluation, de l'expertise à la responsabilité* (Paris: La Documentation Française).

6. Public private partnerships in India: recent policy initiatives and investment trends

Gautam Ray, Kyoto University

INTRODUCTION

The public private partnership (PPP) model has emerged in recent years as the most important policy instrument for attracting private investments in India's chronically deficient infrastructure sector. A series of policy initiatives since 2007 seem to have reduced the barriers to investment in PPP projects.[1] PPP concessions in central government projects increased between February 2009 and February 2010, when new projects worth US$18.5 billion were finalised, with roads drawing US$11.3 billion and ports US$5 billion. In contrast, the cumulative investment in PPP projects between 1995 and 2006 was only US$15.8 billion.[2]

PPP models are now increasingly used in state government projects as well.[3] As many as 1112 state-level projects worth Rs650303 crore ($135 billion) are in the pipeline. These PPP projects are in various sectors, such as education, health, urban development, municipal services, water supply and sanitation. Buoyed by the success of PPP projects in the highway, port and airport sectors, many state governments have now been making special efforts to attract investments and harness private sector efficiencies in infrastructure and public utility services.[4]

The most important driver of the growth of PPP projects in India is increased demand and greater willingness to pay for such services. The demand has been driven by sustained economic growth during the last two decades. In addition, political pressure is increasing for spending more budgetary resources on rural development and poverty alleviation programmes. This increased pressure is prompting governments to adopt proactive policy initiatives to attract private investments in commercially viable infrastructure projects so that more budgetary resources can be provided to the politically sensitive sectors.

A virtuous cycle of investment – growth – more private investment is gathering momentum in India. Private investments in infrastructure are mitigating infrastructure bottlenecks in achieving higher economic growth without governments' having to sacrifice fiscal disciplines mandated under the Fiscal Regulation and Budget Management (FRBM) Act. Private investments are also making way for greater public investment in rural infrastructure, irrigation and other priority sectors, including the targeted programmes for the poor. All these investments in social and economic infrastructures, and their spill-over effects into other sectors of the economy, are creating new employment opportunities for India's burgeoning working-age population. Consequently, the willingness to pay for infrastructure services is increasing, and this increased demand is attracting more private investment, completing the virtuous cycle.

In view of the critical importance of the infrastructure sector, the prime minister of India has recently announced India's plan to double the investment in infrastructure to US$1 trillion during the 12th Plan period, 2012/13 to 2016/17. The vision is captured succinctly by the deputy chairman of the Planning Commission in the following words.

> *An important aspect of infrastructure development in India in the years ahead is that the manner of infrastructure development will be very different from the past with a much larger role from public private partnership. This will throw up new challenges and it will be necessary for policy to be responsive to these new challenges and look for innovative ways of meeting them.* (Planning Commission 2009)

The rest of this chapter on India is organised into eight sections. In the first two sections, the recent policy initiatives, including institutional reforms, are discussed. Section 3 outlines the important features of model concession agreements in highways and ports. It also briefly covers the recommendations of the Chaturvedi Committee set up by the prime minister in August 2009. This is followed by an overview of PPP investments in different sub-sectors and then by a discussion of the problems in implementing PPP projects in India. Section 7 makes the point that foreign investments are yet to play any significant role in Indian PPP projects. Section 8 is intended as a guide to how revenue streams from highway investments can be computed. The chapter provides a conclusion for the discussions and points out the reasons for the sub-optimal value for money (VfM) outcome of India's potentially fertile PPP projects.

1. A PPP project is defined by the Government of India as a project based on a contract or concession agreement between a public authority and a private sector company for investing in construction and maintenance of an infrastructure asset and/or delivering an infrastructure service. In this report, PPP projects are defined as projects that involve transfer or lease of public assets. They are either based on comprehensive concession agreements or take the form of operation and maintenance contracts with public authorities. BOO contracts, which do not entail transfer or lease of public assets, do not fall under this definition although they may fit into the government of India's definition because in many such projects, particularly in the power sector, private investors enter into detailed contracts with public authorities/regulators for production and supply of power at prescribed tariffs for different categories of consumers.

2. See Execution Noble and City of London (2010: 10) for sector-wide investments in the past three years. Conversion rate of US$1= Rs48 is used throughout this paper. Note that 1 crore is 10 million, which means 1 billion=100 crore.

3. The power of the States and the Union are defined by the constitution, and the legislative powers are divided into three lists: Union List, State List and Concurrent List. National highways, airports and major ports are in the Union List. The State List includes state highways, state ports and urban infrastructure. The power sector is on the Concurrent List where both governments can legislate but, in case of conflict, the central legislature prevails.

4. For the list of the state-level projects and their estimated cost see Government of India (2011).

RECENT POLICY INITIATIVES

The policy regime and institutional arrangements have been improving in India since the Inter-Ministerial Committee on Infrastructure (CoI) headed by the prime minister was set up in August 2004. CoI has already initiated a number of institutional regulatory and procedural reforms to maximise the role of PPPs in India's infrastructure development. The principal objective is streamlining and expediting decision making by public authorities in a manner that is fair, transparent and competitive.

Important policy initiatives taken recently by the Government of India include:

1. establishing (a) the PPP Appraisal Committee (PPPAC), to facilitate approval of PPP projects; (b) the India Infrastructure Finance Company Limited (IIFCL), to facilitate the flow of longer-term loans; and (c) the India Infrastructure Project Development fund (IIPDF), to meet project development expenses

2. providing for Viability Gap Funding (VGF) and setting up the Empowered Committee of Secretaries for sanction of VGF

3. issuing standardised guidelines and model documents such as (a) the Model Concession Agreements (MCAs), (b) the Manuals for Specification and Standards, (c) the Model Request for Qualification (RFQs) and Request for Proposals (RFPs), incorporating key principles and best practices for bid processes, and (d) the National Highways Fee (Determination of Rates and Collection) Rules, 2008

4. implementing the recommendations of the Chaturvedi Committee (2009) for national highway development.

Standardised guidelines have also been issued for:

- formulation, appraisal and approval of PPP projects
- availing financial support through grants, and
- refinancing bank lending of longer maturity to eligible infrastructure projects.

Other policy measures include:

- an income tax exemption under Section 80IA of the Income Tax Act
- the Arbitration and Conciliation Act, 1996 based on UNICITRAL provisions
- allowing the duty-free import of construction equipment
- 100% Foreign Direct Investment under automatic route for most sectors, including roads, ports, power, and green field airports
- increasing the overseas borrowing amount from US$100 million to US$500 million
- offering cheaper loans.

INSTITUTIONAL ARRANGEMENTS

Approval of PPP projects

The flow chart in Figure 6.1 shows the procedure for approval for PPP projects and the actions of different agencies in the approval process.

After approval, the bidding process starts. After scrutiny of the bids, concession awards are granted, following which financial closures are done with the banks and other lending authorities. The project may then start its operation provided that land, unencumbered from both legal and political standpoints, is handed over for construction.

Viability gap funding

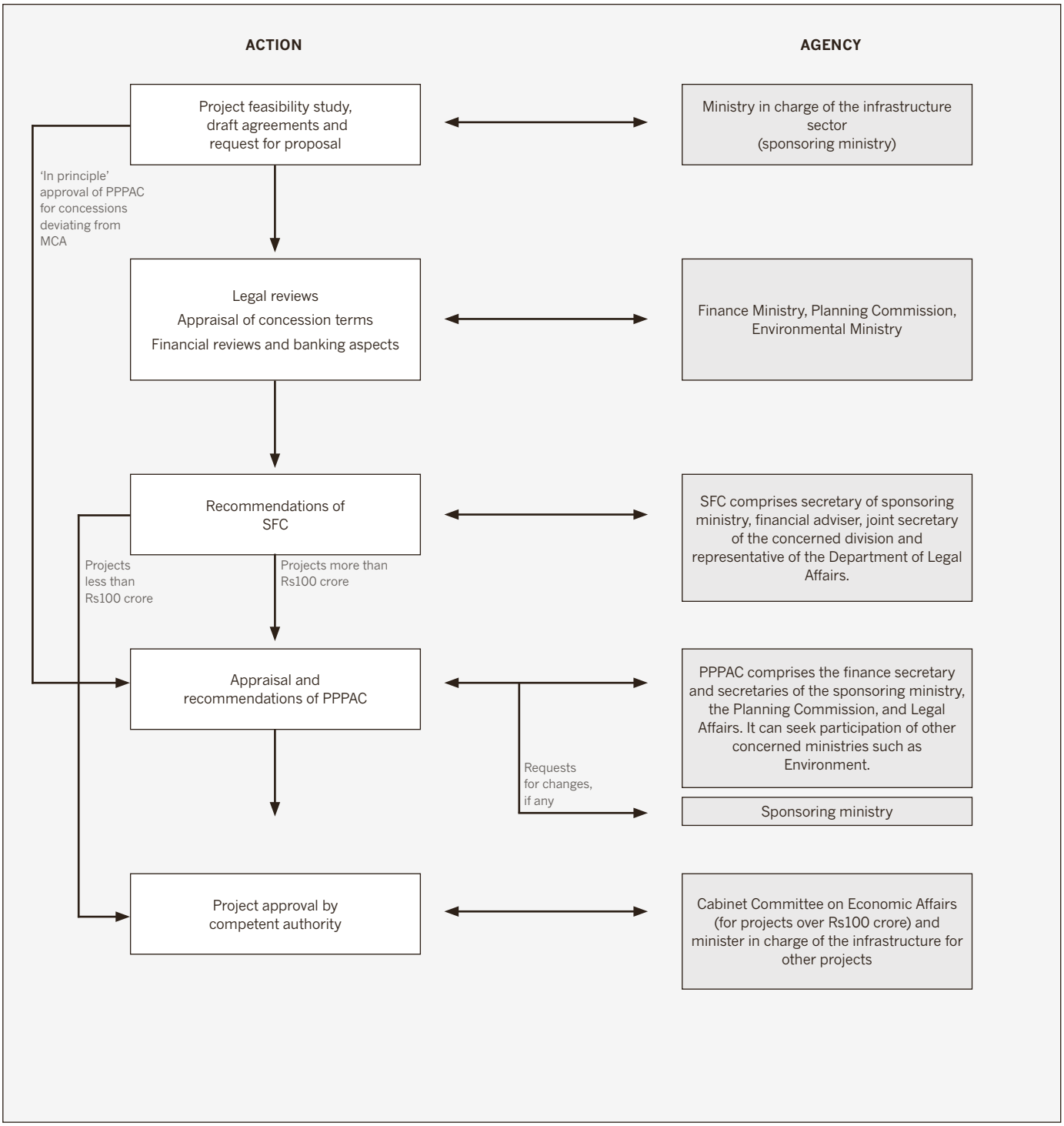
VGF was introduced in 2006 for PPP projects that have substantial economic and social returns but do not pass the standard threshold for financial returns. The scheme provides for budgetary grant assistance of up to 20% of capital costs. An additional grant of 20% of project costs can be provided by the sponsoring ministry, state government or public authority which owns the project. As of March 2009, 139 projects had been approved with a capital investment of Rs1,18,830 crore (US$25 billion) and a VGF commitment of Rs38,993 crore (US$812 million) (Planning Commission 2009: 6)

The following are the eligibility criteria for VGF funding.

- The project should be developed, financed, constructed, maintained, and operated for the project term by a private sector company, selected by the government or a statutory body through open competitive bidding. In the case of railway projects that are not amenable to operation by a private company, this criterion may be relaxed by the Empowered Committee of Secretaries headed by the secretary to the Department of Economic Affairs.
- A PPP project should be from the transport infrastructure, power, education, health, tourism and urban development sector.[5]

5. VGF in other sectors can be granted with the approval of the finance minister, Government of India.

Figure 6.1 Flow chart for the approval procedure for PPP projects



- The project should be a service concession against payment of a pre-determined tariff or user charge.
- The government or statutory authority concerned must certify that (a) the capital costs are reasonable and based on acceptable standards and specification and that capital costs cannot be further restricted to reduce viability gap expenditure from public funds; and (b) neither the tariff/user charge nor the project term can be increased to reduce/eliminate VGF.
- VGF is disbursed after the concessionaire has expended the equity contribution required for the project. It is released in proportion to the debt disbursements remaining to be disbursed thereafter (Ministry of Finance 2010).

India Infrastructure Finance Company

The India Infrastructure Finance Company Ltd (IIFCL) provides long-term debt for up to 20% of the project costs for financing infrastructure projects. Until March 2009, IIFCL had raised Rs15,700 crore (US$3.27 billion) and had approved 88 projects with a total investment of Rs1,47,092 crore (US$30.64 billion) of which IIFCL lending will be Rs18,720 crore (US$3.9 billion). It had already disbursed Rs4,891 crore (US$1 billion) up to March 2009. Of the 88 projects sanctioned by IIFCL, financial closure took place in 78 projects involving an investment of Rs115,689 crore (US$24 billion) (Planning Commission 2009: 6–7).

The government of India has authorised IIFCL to raise Rs10,000 crore (US$2.1 billion) through tax-free bonds and may permit it to raise further resources for supporting PPP projects of longer maturity, particularly in the highways and ports sectors (Planning Commission 2009: 7).

Table 6.1: Toll tariff for national highways

Type of vehicle	Base toll rate for highways of four lanes or more, and bypasses of cost less than 10 crore[1] (Rs per Km)	Base toll rate for bridges/ tunnels for structures of cost between 10 and 15 crore (Rs per vehicle per trip)	Addition to bridge/tunnel toll for costly structures
Car, jeep, van, light motor vehicle	0.65	5	Rs1 for every Rs5 crore or part thereof beyond Rs15 crore and up to Rs100 crore; Rs0.75 for every Rs5 crore between Rs100 and Rs200 crore; and Rs0.50 for every Rs5 crore above Rs200 crore
Light commercial vehicle, light goods vehicle or mini bus	1.05	7.50	Rs1.50 for every Rs5 crore or part thereof beyond Rs15 crore and up to Rs100 crore; Rs1.15 for every Rs5 crore between Rs100 and Rs200 crore; and Rs0.75 for every Rs5 crore above Rs200 crore.
Bus or truck	2.20	15	Rs3 for every Rs5 crore or part thereof beyond Rs15 crore and up to 100 crore; Rs2.25 for every Rs5 crore between Rs100 and Rs200 crore; and Rs1.50 for every Rs5 crore above Rs200 crore.
Heavy construction machinery or earth moving equipment or multi-axle vehicles (3 to 6 axles)	3.45	22	Rs4.50 for every Rs5 crore or part thereof beyond Rs15 crore and up to Rs100 crore; Rs3.40 for every Rs5 crore between Rs100 and Rs200 crore; and Rs2.25 for every Rs5 crore above Rs200 crore.
Oversized vehicles of seven or more axles	4.20	30	Rs6 for every Rs5 crore or part thereof beyond Rs15 crore and up to Rs100 crore; Rs4.50 for every Rs5 crore between Rs100 and Rs200 crore; and Rs3 for every Rs5 crore above Rs200 crore.

National Highways Toll Tariff Structure

National Highways Fee (Determination of Rates and Collection Fee) Rules 2008 (*Gazette of India* 5 December 2008) as amended by National Highways Fee (Determination of Rates and collection Fee) Rules 2010 (*Gazette of India* 3 December 2010) gives the base rates for tolls in 2007/8 for highways with four lanes or more and for permanent bridges and tunnels. Table 6.1 gives the tariff for highways and for bridges and tunnels.

Recommendations of the Chaturvedi Committee

A committee chaired by Shri B.K. Chaturvedi, a member of the Planning Commission, submitted wide-ranging reforms intended to speed up investments in national highway development projects and meet the Government of India's '20km a day' construction target. These recommendations were approved by the Government of India and sanctions issued by the Ministry of Road Transport and Highways Office memorandum dated 5 November 2009.

The changes in key provisions in the Model Concession Agreements are shown below.

Termination provision in Article 29.2.3

Following implementation of the Chaturvedi Committee's recommendations, there can be no reduction of the concession period agreed in the original concession agreement, even if the traffic exceeds the designed capacity early in the concession period. In the new formulation, the National Highway Authority of India (NHAI) may assess the cost of augmentation of capacity and issue a notice to the concessionaire to undertake such augmentation. NHAI may increase the concession period for a maximum period of five years so that the post-tax yield of 16% per annum on the equity investment is ensured. The concession can be terminated only if the concessionaire fails to undertake such augmentation.

Exit policy for concessionaire

In the revised formulation, equity dilution up to 26% is now allowed during the construction period and for two years thereafter. After two years into the operation, the entire equity holding can be sold off subject to NOC from lenders. Article 48 on definitions of change in ownership and article 7.1(k) on representations and warranties have been amended to give effect to the aforesaid changes.

Security for lenders

Article 40.2(b) of MCA has been amended to make a charge on the escrow account created for highway projects as security for indebtedness to senior lenders. Even before this amendment, the concessionaire's right to toll receipts was circumscribed by the lender's overriding control over the escrow account as per the normal escrow agreement for such projects. This amendment puts such loans in the category of secured loans so that credit flows are no longer constrained under extant RBI norms.

MODEL CONCESSION AGREEMENTS

In India, in most sectors, the PPP procurement process is non-negotiated. Recently, the government of India began encouraging domestic as well as foreign investors to participate in PPP projects on a design–build–finance–operate–and–transfer (DBFOT) basis. It has issued 11 standardised model concession agreements (MCAs) and four tendering documents with a view to achieving the objectives of a non-negotiated procurement process, namely, transparency, speed, simplicity and low bidding costs. Four MCAs are for highways: one each for national and state highways, one for operations and maintenance of highways, and one for up-grading national highways; two MCAs are for airports, one each for greenfield airports and for non-metro airports; one is for port terminals; one is for urban rail transit systems; and three other MCAs are for the operation of container trains, for the development of railway stations, and for procurement and maintenance for locomotives.

Highways and ports constitute 75% of PPP investments in value and 70% in number of projects. The key features of their MCAs are described below.

MCAs for highways

1. Concession period

The concession period is determined on a project-by-project basis depending on the volume of present and projected traffic, subject to a ceiling of 30 years. The time required for construction (about two years) is included in the concession period so as to give incentives for early completion.

2. Technical parameters

Only the core technical parameters of design, construction, operation and maintenance are to be specified in the contract, leaving enough room for the concessionaire to innovate and add value.

3. Risk allocation

The upside risk of operating above-target traffic is no longer borne by the concessionaire. The concession period is not shortened if the designed capacity is reached in the middle of the concession period. The downside risk of operating below-target traffic is mitigated by the extension of the concession period by up to 20%. The political risks of land acquisition and environmental clearance are assigned to the highway authority, which is required to hand over possession of at least 80% of the required land and obtain environmental clearance for the project before financial close.

4. User fee

The user fee is based on the declared principles and mechanisms and on the rates notified by the government. These are mentioned in Table 6.1. The user fee is indexed to inflation to the extent of 40% of the rise in the wholesale price index (WPI).

5. Financial close

The MCA specifies a period of 180 days to secure financial close, failing which the bid security is forfeited.

6. Operation and maintenance

MCAs provide for a mechanism to evaluate and upgrade safety requirements as and when necessary. This mechanism provides for traffic regulation, police assistance, emergency medical services and rescue operations. For contracts entered into after 5 November 2009, the damages for breach of maintenance are calculated and paid for each day of delay until the breach is cured at the higher of (a) 5% of average daily fee and (b) 1% of the cost of such repair or rectification for the balance period of the concession. Recovery of these damages is without prejudice to the right of termination.

7. Right of substitution

The concession can be transferred from one company to another in the event of failure of the former to operate the project successfully. For contracts after 5 November 2009, equity dilution of the winning bidder/bidding consortium (change in ownership of the concession) is allowed by up to 26% during the construction period and for two years into operation, following which the entire equity holding can be sold off.

8. Force majeure

MCAs provide protection to the concessionaire against political actions that may adversely affect the project.

9. Termination

A concession contract may be terminated if the concessionaire fails to respond to the notice of the National Highways Authority of India to augment capacity within six months of the notice. Such notice may be issued if the average daily traffic in the project highway reaches the designed capacity in any accounting year. In the event of termination, the MCA provides for protection of the project debt by the Highways Authority. There are two possible situations:

- if termination occurs as a result of default by the concessionaire, 90% of the debt is protected
- in the event of non-political force majeure such as natural disasters, 90% of the debt not covered by insurance will be protected. If the concessionaire fails to commission the project owing to its own default, however, no termination payment will be due.

MCAs for ports

The concession period is 30 years. The tariff of port charges is fixed by government inflation indexing up to 40% of WPI.

The government is encouraging concessionaires to build infrastructures with large capacities, with redundancy of up to 30%.

Output specifications provide enough room for the concessionaire to innovate and add value.

Concessionaires not only procure civil works and equipment, they also handle cargo.

Time for construction of a port terminal is fixed at two years.

The key performance indicators include dwell time of the cargo at port terminal, berth productivity, vehicle-service time and ship-handling productivity.

Penalties are specified for continued failure in achieving requisite levels of performance.

Selection is based on revenue share with the port trust.

Only political risks are assigned to the port trust/ government. Termination payments are predetermined.

In the case of shortfall in traffic growth by 10% after 20 years, the concession may be extended by five years. An increase of 6% in target traffic reduces the concession by 18 months.

INVESTMENTS IN PPP PROJECTS

PPP projects constitute a growing component of private investment in India's infrastructure sectors, which have themselves been growing at a rapid pace over the last decade. The estimated share of private investment in India's infrastructure projects during the current plan period (2007/8 through 2011/12) is projected at Rs619,591 crore (US$129.12 billion), 30% of total planned investment of Rs2,056,150 crore at 2006/7 prices (US$428 billion) as against Rs175,203 crore (US$36.5 billion)[6] during the 10th plan period (Planning Commission 2009). Table 6.2 gives cumulative figures for projects under implementation and awaiting approval as of December 2009.

Table 6.2: Investments in PPP projects under implementation/pipeline as of December 2009 (in Rs crore)

Sl. No	Sector	Projects under implementation	Projects in pipeline	Total investments
1	National highways	41,911	76,341	118,252
2	Major ports	10,509	18,466	28,975
3	Airports	18,777		18,777
4	Railways	4,717	90,000	94,717
	Total central government	**75,914**	**184,807**	**260,721**
5	Roads	60,865	39,482	100,347
6	Ports	51,549	17,436	68,985
7	Airports	500	4,120	4,620
8	Railways	500	312	812
9	Power	28,392	62,032	90,424
10	Urban infra	19,738	45,838	65,576
11	Other sectors	3,653	22,534	26,187
12	Total state government	165,197	191,754	356,951
	GRAND TOTAL	**241,111**	**376,561**	**617,672**
	GRAND TOTAL (in US$ billion)	50.23	78.45	128.68

Source: Planning Commission (2010)

Table 6.3: Estimated PPP investments during the 11th plan period (2007/8 through 2011/12)[7]

Sectors	Total 10th Plan	Private investments during the 10th Plan	Estimated PPP investments
Airports	30,698	21,630	21,630
Energy	666,525	185,512	9,275.6
Ports	87,995	54,479	54,479
Roads	314,152	106,792	106,792
Water supply and sanitation	143,730	5421	5,421
Railways (including MRTS)	261,808	50,534	15,160.2
Telecommunication	258,439	177,686	0
Gas	16,855	6,528	1,305
Storage	22,378	11,189	0
Irrigation	253,301	0	0
Total (Rs crore at 2006/7 prices)	2,056,150	619,771	204,063
Total (US$ billions)	428	129.12	42.51

The last column of Table 6.3 gives the sector-wide estimates of investment under PPP concessions during the current plan period while the column to the left of that gives the planned sector-wide amount over the eleventh plan period. Actual investments over the 10th plan period are given in the first column. The estimates are made on the basis of the following assumptions. First, in recent years, private investments in highways, ports and airports projects have been coming mostly through concessions agreements. Thus, it can be assumed that private sector investment will be only through PPP projects in these sectors during the current plan period.

Second, as of now, investments in power projects are being done either by private companies or public sector companies such as National Thermal Power Corporation (NTPC). Since this trend is likely to continue in the remaining period of the current plan, it is assumed that only 5% of the private investments in the energy sector and gas sector will come through PPP projects.

6. The official investment figures in US$ given in the Planning Commission document takes the conversion rate of Rs40 per US$ while in this paper the conversion rate of Rs48 for US$1 is used.

7. Note that these projections are much lower than the estimates made in Table 6.2 for two reasons. First, this table gives estimates of planned investments during the current five year plan while Table 6.2 gives the investments in an aggregate compendium of projects including those spilled over from the earlier plan periods. Second, some of the projects in Table 6.2 particularly in energy, railways, and urban development may not involve any transfer or lease of public assets. So they are not PPP projects as per the definition adopted in this paper and therefore omitted in the estimates given in this table.

Third, as not one private investment in telecommunications projects has followed the PPP route, it is assumed that this trend of pure private investment will continue in the next two years. Fourth, the railways PPP projects worth only Rs4,717 crore are under implementation as of December 2009, so it is assumed that only 30% of the projected private investments of Rs50,534 crore could be achieved under the PPP model during the remaining two years of the current plan period.

On the basis of these assumptions, the share of PPP projects in private investments in the infrastructure sector is calculated to be about one-third, US$42.5 billion, out of the projected total private investment of US$129.12 billion. If the same one-third ratio is maintained in the 12th five-year plan period 2012/13 through 2016/17, projected aggregate PPP investments on new projects to be drawn up for implementation during the ensuing 12th plan period will be around Rs170 billion[8] which is four times the estimated investments on PPP projects drawn up for implementation during the current plan period.

Going by the above estimate and the Execution Noble and City of London (2010) finding that US$25 billion (including power projects, which were roughly US$3 billion) were invested during September 2006 through to February 2010, about 60% of the estimated investment under the current plan has been made so far. The compliance rate, in terms of implementation of PPP projects out of those planned under the current plan, is much below 60%. This is because a portion of the investment shown in Table 6.3 has come from projects planned and approved during the preceding plan periods that did not reach financial closure or could not be implemented for other reasons.

PROBLEMS IN IMPLEMENTATION OF PPP PROJECTS

Actual implementation of all infrastructure projects, including PPP projects, has fallen significantly short of projected investments. According to Gupta et al. (2009), the shortfall in 2007/8 and 2008/9 has been on two levels. First, Nodal agencies such as the National Highways Authority of India (NHAI) have not tendered projects as per the plan. Second, many tendered PPP projects have not found bidders owing to viability concerns and bidding eligibility criteria that restricted players who had been shortlisted for eight or more projects from bidding in NHDP Phase III projects (Gupta et al. 2009: 1).

Approval of PPP projects has, however, picked up pace in recent years. According to the official PPP in India database (Government of India 2011), as of October 2010, 515 PPP projects were underway. 180 PPP projects, each worth more than Rs100 crore, have been approved by PPPAC9 from 29 August 2006 to 10 October 2010. Aggregate investment in these projects is of the order of Rs177,879.66 crore (US$37 billion); 164 projects worth Rs151,934 crore (US$31.65 billion) are in the roads and highways sector while ports account for 14 projects worth Rs14,807 crore (US$3 billion). As many as 144 projects (80%) were approved after April 2008, which clearly shows that the approval process has speeded up in recent years.

A project may be delayed for several reasons even after its approval. First, in some cases only single bids come finally from the qualified bidders. Concessions cannot be awarded in such cases unless projects are restructured and they go through bidding process *de novo*. Second, the project may be challenged in the courts on several grounds, including faulty bidding process and for environmental reasons. Third, land assembly and utility removals may be delayed. In some cases, project authorities face steep claims for compensation for utility removal that they cannot pass on to the concessionaire. In other cases, governments face political opposition in acquiring land. Fourth, bank agreements may be delayed on account of certain changes in project parameters or in monetary policy between the time the project was originally prepared and the time when it finally cleared all hurdles. Such changes may increase the project risk and alter the project's bankability coordinates. Finally, inability of concessionaires to raise long-term debt without suffering high cost of debt service is a general constraint in implementing PPP projects.

The following examples illustrate the nature of specific problems faced in implementing PPP projects in India.

The Nhabhi Mumbai Greenfield Airport project is held up because of a dispute over whether mangrove clearances for the construction of the airport should be subjected to the same elaborate procedure of clearance as required for clearance of forests under India's Forest Conservation Act. The matter went to the Mumbai High Court, which recently ruled in the affirmative. The process of environmental approval for mangrove clearance has to start afresh, going right back to the local district authorities in the areas where such forests are being cut, and will finally end with the approval by the central Environment Ministry.

The fourth international container terminal project at Jawaharlal Nehru Port, Nhava Sheva, Mumbai worth Rs6,700 crore (US$1.4 billion) could not be awarded this year owing to litigation over the bidding procedure.

Political opposition in acquiring land is a common cause of delay in project implementation in some areas in eastern and central India where Maoist influence is strong in the state governments. Sometimes places of worship also create obstacles to land acquisition. For example, a

8. Private investment is projected at US$500 billion, 50% of the total investment of US$1 trillion.

9. Projects below Rs100 crore are not required to be approved by this committee. They are approved by the Standing Finance Committee (SFC) or EFC and then by the relevant Minister.

capacity expansion project of Kolkata International Airport has been delayed as there was political opposition to acquiring land on which a mosque was built.

Out of 21 targeted PPP projects for major ports during 2010/11, only two projects, at Tuticorin and Ennore ports, with investments of Rs14,000 crore (about US$3 billion) could be finally awarded (Business Standard 2010). The requirement of construction of excess capacity up to 30%, uncertainty over future tariff increases, and the system of not allowing the concessionaire to phase out capital expenditure in cases where it will take several years to reach full capacity, are cited as reasons for lack of sufficient interest by potential investors.

FOREIGN DIRECT INVESTMENT (FDI) IN PPP PROJECTS

Although 100% FDI is allowed in most infrastructure sectors, including roads, ports, greenfield airports, energy and urban development, foreign equity participation has been a meagre 1% of the total investment in PPP projects. According to the official PPP in India database, 27 foreign companies invested only Rs1,725.85 crore (less than US$3.6 billion) by way of equity participation.[10] As reported in the database, foreign players have participated in only 22 projects (7%); nine projects in the port and road sectors, and four projects in airports. Prominent PPP projects where they have equity stakes include Mumbai and Delhi international airports, Bangalore International airport, Delhi-Noida toll bridge, Pipavav port, and JNPT container terminal.

Road infrastructure projects are overwhelmingly dominated by domestic players with little presence of foreign investors. Among the domestic players, Larson & Toubro is the leader followed by GMR Infrastructure and IVRCL Infrastructure & Projects Ltd. In the case of small road projects, Sadbhav Engineering Limited is the leader company.

COMPUTATION OF RETURNS FROM HIGHWAY INVESTMENT

The example of a hypothetical highway development project given below shows how to assess returns from such a project. Let us take the development of a 100km segment of a four-lane national highway that is going to be ready for operation from April 2012. The revenue streams from the project can be computed using the toll tariff structure given in Table 6.1. Assume that the distribution of traffic in the highway is as follows: cars and other LMVs constitute 30%; LCVs 30%; and buses and trucks 40% of the traffic. Assume also that:

- the average growth of traffic in the last two years has been 10% from the baseline average daily traffic of 12,500 vehicles in 2008/9 when the project was awarded
- WPI rose by 5% in 2008/9, 6% in 2009/10, and is expected to rise by 7% in 2010/11, and
- the estimated cost of construction of the segment is Rs50 million per kilometre (US$1.02 million per km).

Total estimated annual toll revenue in this case in the first year of its operation in 2010/11 works out at Rs824 million (US$17.2 million) out of a total investment of Rs5 billion (US$102 million): that is a 17% return on investment in the first year. For such a project the bidders may do without a VGF grant as it is clearly a bankable project under DBFOT/BOT (Toll), even if the designed capacity is reached only half-way through the concession period of 20 years. The exit option is also easy as there will be buyers for this concession at a good premium.

CONCLUSIONS

The potential of India's infrastructure sector as an attractive destination for future investment has to be seen from a multidimensional perspective. First, India's high growth over the last two decades, averaging about 7% per annum, has put a severe strain on its already low level of physical infrastructure for the size of its economy and its growth over the last two decades.[11] Therefore, the marginal product of capital investment in India's infrastructure ought to be considerably higher than in countries that do not have such acute infrastructure shortages. It is also higher than in many other countries that have a smaller market size and have been growing at a slower pace. The supply constraints and persistent demand for new capacity in transport infrastructure, energy and telecommunication witnessed in India in recent years are clear indicators of high potential private returns from these investments.

Second, a higher level of good-quality infrastructure will facilitate entry of global players and foreign direct investment across the Indian economy. As more global players enter the Indian marketplace there will be higher level of competition, which will have a beneficial effect on the productivity of domestic manufacturing and service enterprises. Such competition will reduce surplus rents and the corruption that comes with such rents. Moreover, the demand for infrastructure services shall also increase with greater economic activity by global multinationals.

Third, but for improved infrastructure services, particularly in the power and transport sectors, India's manufacturing industry will not be in a position to attain the scale and scope necessary for increasing its export growth potential. The growth of the manufacturing sector is essential to enable India's burgeoning working-age population to find gainful employment opportunities. If this fails, instead of fuelling economic growth, India's younger demographic profile will cause social tension and conflicts.

10. Malaysian companies are the leaders with investment in six projects, followed by the UK in four, Mauritius with three projects and two each by France, Germany, the UAE and the Philippines; and one each by the US and by Switzerland (Government of India 2011).

11. The level of investments in India's infrastructure has been low; it was 5% of GDP in 2007 which is considerably less than the average level in developing countries in Asia and Latin America.

Fourth, with greater levels of private investment in infrastructure projects, the government will be in a better position to provide budgetary support for critical services such as water supply and solid waste management, for which the willingness to pay is still not high in India. State governments will also be able to invest more capital resources in electrification, irrigation and water resources for India's 600,000 villages. Such and investment will boost the growth of sectors such as FMCG, consumer durables, telecommunications, insurance, education, and healthcare services in those areas. This, in turn, will increase the demand for privately funded infrastructure services.

For these reasons, the multiplier effect of investment in infrastructure sector is very high in India. On account of its scale and scope, India's domestic market provides ample avenues for internalising the externalities and capturing complementarities associated with investments in infrastructure sectors. Considering their spill-over effects into other sectors of the economy, the aggregate social returns of such investments in India are also likely to be high.

The recent spurt in capital flow in PPP projects suggests that the private sector is beginning to appreciate the potential returns of these projects. Nonetheless, two major problems still remain. Leading global infrastructure construction companies have not yet effectively responded to the globally tendered bids in India's PPP projects; and domestic players who can develop good-quality infrastructure within time and cost constraints are too few in number. Consequently, a significant number of projects have been drawing no qualified bid or only single bids, leading to cost and time overruns. In other words, private sector efficiencies are not being harnessed adequately. For these reasons, value-for-money (VfM) for PPP projects in India has been sub-optimal or below its true potential. The major challenge for the policymakers is that of finding innovative ways of promoting competition by facilitating the entry of global players and breaking the prevailing nexus between a few domestic players and project authorities.

REFERENCES

Business Standard (2010), [report] 21 November, <http://www.business-standard.com/india>, accessed on 20 December 2010.

Chaturvedi Committee (2009), Report of the B. K. Chaturvedi Committee on NHDP, 27 August 2009, <http://www.nhai.org/Final%20Report%20of%20BKC%20committee%2027%2008%202009%20recd%20%20from%20JS%20_PPP_.pdf>, accessed on 24 December 2010.

Execution Noble and Company and The City of London (2010), *Indian Infrastructure: Going Beyond the Sound Bytes*, [online position paper], <http://www.execution-noble.com/content/1241/Final%20Position%20Paper%20-%20no%20marks.pdf>, accessed 17 November 2011.

Government of India (2008), 'National Highways Fee (Determination of Rates and Collection Fee) Rules, Extraordinary Notification G.S.R. 838(E)', *The Gazette of India*, 5 December (Ministry of Shipping, Road Transport and Highways).

Government of India (2010), 'National Highways Fee (Determination of Rates and Collection) Rules 2008 as amended by National Highways Fee (Determination of Rates and collection) Rules 2010', *The Gazette of India,* 3 December (Ministry of Shipping, Road Transport and Highways).

Government of India (2011), *Public private partnerships in India* [website] (Dept of Economic Affairs, Ministry of Finance, Government of India), <http://www.pppinindia.com>, accessed 17 November 2011.

Gupta, Prashant, Gupta, Rajat and Netzer, Thomas (2009), *Building India; Accelerating Infrastructure Projects* (Mumbai: McKinsey & Company Inc.).

Ministry of Finance (2010), 'Viability Gap Funding', *Public private partnerships in India* [Government of India's Public-Private Partnership website], <http://www.pppinindia.com>, accessed 24 October 2010.

Ministry of Shipping, Road Transport and Highways (2010), 'National Highways Fee (Determination of Rates and Collection Fee) Amendment Rules, Extraordinary Notification G.S.R. 838(E)', *The Gazette of India*, 3 December.

Planning Commission (2009), 'Investment in Infrastructure: Projections in the Eleventh Five Year Plan' (New Delhi: Government of India).

—— (2010), 'Compendium of PPP Projects in Infrastructure in India', <http://infrastructure.gov.in/pdf/compendium-of-ppp-infrastructure.pdf>, accessed 24 December 2010.

7. Public private partnership in Indonesia: Is infrastructure development in Indonesia shifting towards a decreasing role for government?

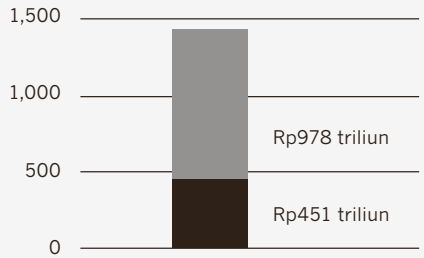
Pradono, Wishnu Bagoes Oka and Diandra K. Pratami, Institute of Technology of Bandung

INTRODUCTION

Many would argue about whether the implementation of public–private partnerships (PPPs) in the provision of infrastructure will diminish the role of government. Nonetheless, in Indonesia PPP is seen as a solution to the main constraint in infrastructure development, the financial gap in infrastructure funding. Although PPP has been used since the 1980s it still faces major challenges. The government has responded to the challenges by various policy enactments over the years but only the recent establishment of financing institutions and a government organisation responsible for PPP development has provided the basis for an emerging PPP framework. This chapter discusses the government's role in the practice of PPP in Indonesia, its history, institutions and capabilities, PPP models, relevant organisations, public accountability, accounting treatment, procurement procedure, contractual agreement and financial aspect. The practice of PPP in Indonesia will be illustrated by two study cases that demonstrate good practice in PPP as well as the challenges it faces.

The provision of infrastructure through PPP in Indonesia is desired principally because of the demands for equitable infrastructure development, which encounter an obstacle in the form of governmental financial constraints. Other factors, such as the transference of risk to the private sector and the urgency of accelerating economic growth, are the internal drivers of developing PPPs in Indonesia. The government has acknowledged that the main factors in the development of PPP are the gap in infrastructure financing, the risk-related issues in infrastructure financing, and the need to improve the quantity, quality and efficiency of infrastructure provision to society . During the fiscal years 2005–2009, the government could finance only 17% of the total required amount for infrastructure construction, and the national bank covered 21%, which left 62% of this finance to be obtained through other sources.

Figure 7.1: Government funding capacity and required infrastructure financing 2010–14



Source: Indra (2009).

The figures estimated for the fiscal years 2010–14 in Figure 7.1 show positive signs compared with the fiscal years 2005–9. The government's financing capabilities have increased to 31%, or in the region of Rp451 trillion (see Figure 7.1), of the total required amount of infrastructure financing, leaving the remaining 69% to be financed by other sources. This figure is only a recent example of financial gap issues in Indonesia, and such issues are also experienced by many developing countries. To bridge the financial gap in the provision of infrastructure, the government of Indonesia has, since the early 1990s, supported the development of PPP by developing a PPP framework based on various regulations.

Nonetheless, as with other government policies in Indonesia where the decisions are made through highly political processes, the implementation of PPP faces several constraints, It is seen by many as a process where interference by a lot of interested parties can damage the accountability of PPP projects. For example, there has been evidence indicating the involvement of the former president's family in early PPP toll road projects, which many people see as nepotism. There are also critics of the transference of risk to the private sector. During the economic crisis of the late 1990s, the private sector was unable to carry the risks, which led to the delay of PPP projects. This was seen as evidence of the government's wrong perception of PPP as a method of transferring risk, although many argue that the impact of the financial crisis was too heavy to be borne by the private sector alone. These are some of the challenges in PPP implementation and explain why the PPP framework needs to be adapted from time to time.

HISTORY OF PPP EVOLUTION

The first phase of the evolution of PPP in the 1980s started in the toll road sector through the adoption of Law No. 13 Year 1987 / *Undang-Undang No. 13 Tahun 1987* on Roads, and Presidential Regulation No. 8 Year 1990 / *Peraturan Presiden No. 8 Tahun 1990* on Toll Roads. The immediate impact of the regulations can be seen in the building of the Tangerang–Merak toll road. The government has tried to implement PPP in different sectors such as the electricity sector but progress has not been as fast as in the toll road sector. The next phase of PPP development in Indonesia was marked by a decline in PPP due to the tremendous impact of the economic crisis that hit Asia in 1998.

Table 7.1: Indonesia's PPP evolution

Up to 1990	1990–97	1998–2004	2005–9
PPP legislation: • Law 15/1985 on electricity • Law 13/1987 on roads • PP 8/1990 on toll roads • PP 10/1989 on electricity Sectors: • toll roads • IPP (proposal)	PPP regulations: • Keppres 37/1992 on private electricity • Keppres 55/1993 on land acquisition Sectors: • toll roads • water • electricity • ports	Presidential Decree (Keppres 7/1998) Cross-sector application Asian financial crisis Major changes: • global economy • political system • decentralisation • government institutions • several new laws on infrastructure passed • renegotiation on IPPs • KKPPI formed	Infrastructure Summit 2005 Perpres 36/2005 on land acquisition Perpres 42/2005 on KKPPI CIIF Perpres 67/2005 IICE 2006 PMK 38/2006 Reform of sector laws Establishment of RMU and Guarantee Fund Land Revolving Fund PT. SMI, IIFF P3CU PPP book PDF
Introduction for infrastructure		1998–2004: consolidation period following the Asian financial crisis and changes in the Indonesian political system	2005–9: laying the foundation for PPP project implementation through policy and regulatory reform to adopt international best practices

Source: National Development Planning Agency (2010).

More recently, the development of PPP in Indonesia was supported by the government with the adoption of best practices of PPP on the international level through the Presidential Regulation No. 67 Year 2005 on Public-Private Partnership in Infrastructure Development. The regulation served as a basis for all PPP frameworks until its revision in 2010 through the Presidential Regulation No. 13 Year 2010. Government efforts to develop PPP can also be seen in the establishment of a government institution to support the PPP policy. As the foundation for a PPP framework in Indonesia has now been developed, an improvement in the quantity and quality of PPP project development is expected to occur in coming years. The development of PPP in Indonesia is illustrated in Table 7.1.

THE CHANGING ROLE OF GOVERNMENT IN PPP

As explained above, Indonesia has experienced several changes in PPP implementation. These changes can be seen as a form of adaptation to the latest conditions. In accordance with the framework changes, the role of government in PPP has also changed over time. In the early years of PPP implementation, the government was a dominant player in the financing of PPPs. This can be seen in the dominant share of state-owned enterprises in PPP infrastructure projects. In the mid 1990s, the private sector was given a larger role in PPP project financing, although this was still relatively small compared with the role of the government through its state-owned enterprises. During this period, many projects were affected by the impact of the economic crisis and many also carried the consequences of longstanding corruption and nepotism. Therefore, many projects were taken over by the government and many were also stopped due to the government's financial constraints. This shows that after the economic crisis, the role of government in PPP financing became more dominant.

After the economic recovery in the early 2000s, the private sector began to take small initiatives in several project companies involved in toll road developments. The private sector's role grew larger with the introduction of Ministry of Finance Regulation No. 38 (2006),[12] which gives the government a new role in PPP project financing as a guarantor. During this period, the government's role shifted slightly from being just a financier to being both financier and guarantor. Although still a dominant player in PPP financing, this new role has opened the door for the private sector to be more involved in PPP financing. As a result, during the late 2000s, the private sector became a major shareholder in several project companies, such as the Kanci-Pejagan (Central Java) and Jakarta Outer Ring Road section W1 (Jakarta) toll road projects. In the future, it is likely that the private sector will play a bigger role in PPP financing, as the government (through the Ministry of Finance and several recently established state-owned enterprises) will focus on the role of guarantor jointly with development banks.

Theoretically, the increasing role of the private sector in PPP financing can be seen as an act of privatisation (Khanom 2009). Owing to the nature of the private sector in maximising profits, the project should become more efficient compared with conventional infrastructure development. This is one of the motives underlying a government decision to implement PPP.

From the perspective of the public sector, the change of the government's role from financier to guarantor can also be seen as a form of efficiency in which the government may allocate its financial resource to fund other projects that are not under the PPP framework. Even so, the fact that infrastructure projects in Indonesia usually have a large amount of risk means that a role as project guarantor would remain a difficult task, especially when these risks are related to costs (such as land acquisition[13]).

The dominant role of the public sector can be seen as indicating a reluctance by the government in transferring some responsibility to the private sector. Nonetheless, the fact is that there are only a few financially viable projects offered for PPP, and owing to the projects' marginal financial viability, government financial support is needed, often for a large amount. This explains why the state-owned enterprises are often the dominant shareholders in infrastructure projects. Under the expectation that PPP financing will become more efficient, the government should improve the proposed PPP projects' financial feasibility through economic development. That way, the role of the private sector in PPP financing would increase and, therefore, decrease the role of the government and increase efficiency.

THE MODIFIED-BOT MODEL IN PPP PROJECTS

Indonesia developed PPP projects first in the early 1990s with the establishment of the Tangerang – Merak Toll Road, learning from the PPP experience in other countries. Nonetheless, the implementation of PPP in Indonesia shows Indonesian-specific characteristics. According to Yescombe (2007) there are four widely known implementation models:

- Design – Build – Finance – Operate (DBFO)
- Build – Transfer – Operate (BTO)
- Build – Operate – Transfer (BOT)
- Build – Own – Operate (BOO)

In practice, three infrastructure project business models have been applied to toll road projects as illustrated in Table 7.2: the Pure Public Model, the BOT Model and the Joint-Venture Model, also known as the Modified BOT model (Nippon Koei Co. Ltd. 2007)). In fact, only the latter two are considered to be PPPs.

12. Later revised through Ministry of Finance Regulation No 260 (2010).

13. The government is in the process of developing a new regulation on land acquisition with the House of Representatives, which it is hoped will solve the issues of land acquisition for infrastructure projects and reduce the land acquisition risk of such projects.

Table 7.2: Investment schemes

Feasibility		Land acquisition	Construction	Operation and maintenance
Economic	+	Government		Private entities
Financial	–			
Economic	+	Government	Business entities	Private entities
Financial	Marginal			
Economic	+	Private entities		Private entities
Financial	+			

Source: Indonesia Toll Road Authority Ministry of Public Works (2008).

In the BOT model, the private sector fully funds the financing of land acquisition, construction and operation and maintenance phase through project companies. In the recent practice of PPP, however, many projects have had marginal financial feasibility and, given its nature, the private sector is interested only in projects with good financial feasibility. Therefore, projects with a marginal financial feasibility are expected to have government financing participation[14] for land acquisition and/or parts of the construction, which leaves the private sector parties to participate in other parts of the construction phase, in operation and maintenance, and phase financing. This is done to strengthen the financial feasibility of those projects with marginal feasibility in order to stimulate the interest of private investors to invest in the project. The participation of government through financing the project,[15] as explained above, is the basic characteristic that differentiates the modified-BOT model from the BOT model.

Table 7.3: Toll road network in operation managed by the private sector

No	Toll roads	Length	Project company	Start operation
1	Tangerang – Merak	73.00	PT. Marga Mandala Sakti	1987–96
2	Ir. Wiyoto Wiyono, MSc	15.50	PT. Citra Marga Nusaphala Persada	1990
3	Surabaya – Gresik	20.70	PT. Margabumi Matraraya	1993–6
4	Harbour Road	11.55	PT. Citra Marga Nusaphala Persada	1995–6
5	Ujung Pandang Tahap I	6.05	PT. Bosawa Marga Nusantara	1998
6	Serpong – Pondok Aren	7.25	PT. Bintaro Serpong Damai	1999
7	SS Waru – Bandara Juanda	12.80	PT. Citra Margatama Surabaya	2008
8	Makassar Seksi IV	11.60	PT. Jalan Tol Seksi IV	2008

Source: Indonesia Toll Road Authority Ministry of Public Works (2008).

According to the Independent Auditors Report 2009 (HLB Hadori Sugiarto Adi & Rekan 2010), of eight toll road networks in operation managed by the private sector, six are using the modified-BOT model[16] (Tangerang-Merak, Ir. Wiyoto Wiyono MSc, Surabaya-Gresik, Harbour Road, SS Waru-Bandara Juanda, Serpong-Pondok Aren) and two are using the BOT model (Ujung Pandang Tahap I, Makassar Seksi IV). The implementation of a modified-BOT model in most PPP projects can be seen as an indication of a high level of government intervention in the toll road business. This also indicates that, on average, the financial feasibility of projects in the toll road sector of PPP is still marginal, given that government participation in infrastructure funding is high. The government is still playing a key role in infrastructure financing.

14. According to Presidential Regulation No.13 Year 2010 concerning Revision on Presidential Regulation No. 67 Year 2005 / *Peraturan Presiden No. 13 Tahun 2010 mengenai Perubahan Peratyran Presiden No. 67 Tahun 2005,* the government can participate in the project financing through government support and government guarantees. Government support can be in the form of fiscal contribution on the land acquisition, paying for part of the construction, and other supports such as tax incentives, while government guarantees are a form of compensation covering the occurrence of certain risks associated with projects, which can be given with regard to the principles of risk control and management. The government financing participation referred to in the text refers to the government support, which is seen as a government investment. The government as an investor would, therefore, be compensated with a share in the project company, as are the private entities, as they both funded the project through the project company.

15. The participation of government through financing cited in the text above refers to the government support.

16. Toll road projects with a government share in the project company owned through PT. JasaMarga (a state-owned enterprise) fall into the category of modified-BOT; the project company invests along with the private entities as they both funded the project through the project company. The participation of government through financing in the text above refers to the Government Support. Toll road projects with a government share in the project company through PT. JasaMarga fall within the BOT model.

THE CURRENT PPP SCHEME IN INDONESIA

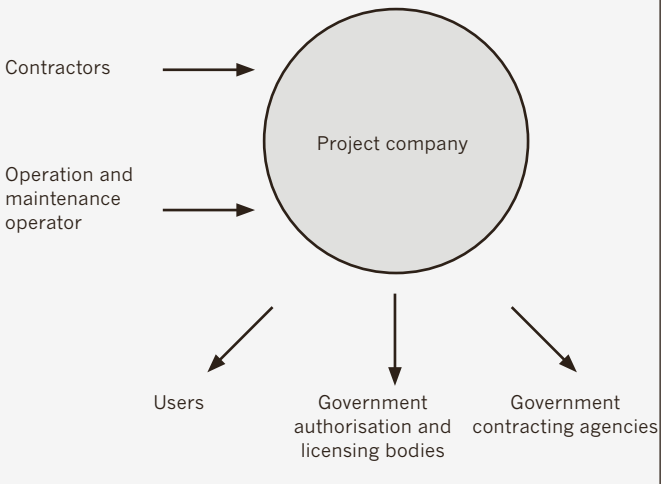
A typical PPP structure can be quite complex, involving contractual agreements between government, financiers, engineers, contractors, operators and customers (Transport Policy and Tourism Section 2008). The National Development Agency, as the responsible authority for formulating PPP policy, has recently developed a new PPP scheme. The following section will discuss the relations between the project companies (also known as Special Purpose Vehicles/SPVs) and their clients, the relevant organisations in national PPP governance, the financing scheme, the participation of local government in PPP, and the contractual scheme between a project company and its clients.

A project company and its clients

According to the new PPP scheme, project clients are divided into three types:

- the third-party service provider, which consists of contractors and an operation and maintenance operator
- the service off-taker, which is the user, and
- the licensing and permitting agencies and government contracting agencies (GCAs). The relationship is illustrated in Figure 7.2.

Figure 7.2: PPP project clients



Source: Coordinating Ministry of Economic Affairs (2010).

A third-party service provider can assist the project company on project construction (including engineering and construction), project operation and maintenance, and other aspects. Such providers can be contractors, providing construction services in the area of construction planning consulting, construction works and construction works supervision consulting; or they can be operation and maintenance operators, private contractors who are paid to manage and operate services.

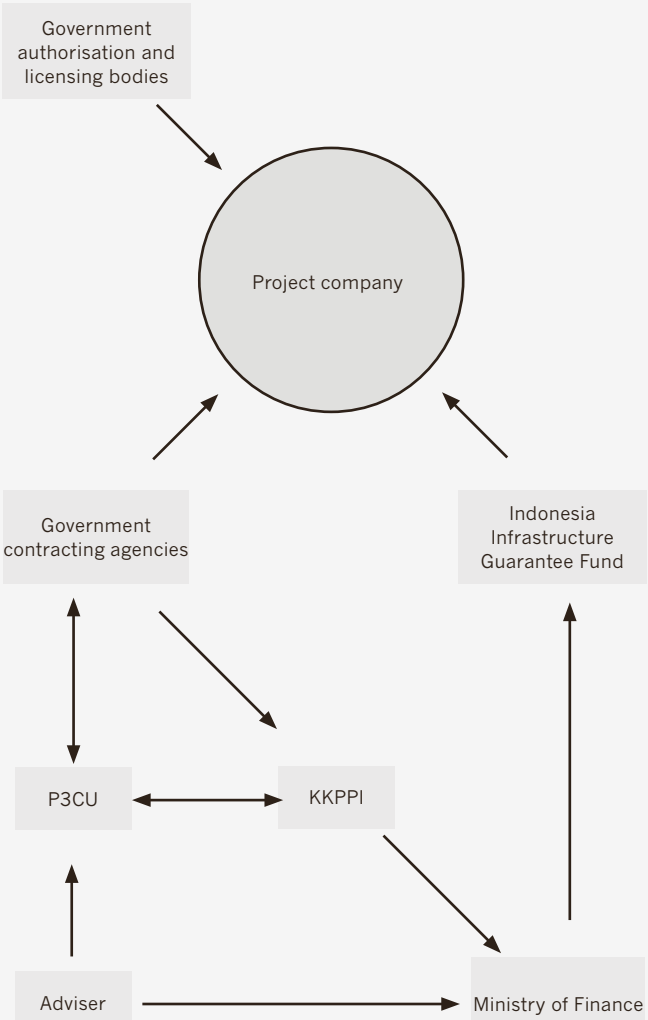
The user of the project facility takes the form of a GCA, a company that buys the outcomes of the PPP project as a single buyer (single off-taker) and distributes them to the customers, such as those in the water and electricity sectors. The GCA acts as an administrator of the facility after the concession period ends. Authorisation and licensing bodies are governmental bodies with responsibility for environmental management, foreign investments and company establishment (for example, the Coordinating Body in Capital Investments), labour and immigration and other bodies needed to obtain authorisation and approval in order to operate the company (Coordinating Ministry of Economic Affairs 2010). From this scheme, we can see that the government is playing a key role in PPP implementation through GCAs and authorisation and licensing bodies.

Relevant organisations for national PPP governance

There are four main national organisations involved in developing PPP policy: the National Development Agency, the Ministry of Finance, the Coordinating Ministry of Economic Affairs, and the Policy Committee for Accelerating the Provision of Infrastructure. The Public-Private Partnership Central Unit (P3CU), a unit in the National Planning Agency, carries out most of the agency's PPP development work, such as policy development, jointly with the Policy Committee for Accelerating the Provision of Infrastructure. It also carries out assessments of the demand for conditional support from the government, helping the government to identify the list of projects that are likely to be attractive for private investment.[17] The Ministry of Finance, responsible for managing government investment, covers regulation (through the Directorate General of the Treasury), supervision (through the Central Government Investment Committee) and operations (through the Centre of Government Investment). The Coordinating Ministry of Economic Affairs regulates a more general and cross-departmental policy related to PPP than does the Ministry of Finance. The Policy Committee for Accelerating the Provision of Infrastructure (KKPPI) is an inter-ministerial committee, chaired by the coordinating minister of economic affairs, responsible for policy coordination related to the private provision of infrastructure. On the basis of the regulation, KKPPI is

17. P3CU categorises PPP projects in three stages: potential PPP projects at the preliminary study stage, priority PPP projects where the PPP model has been identified, and PPP projects 'Ready for Offer', where bidding documents have been completed and government support has been approved (Asia-Pacific Economic Cooperation 2009).

Figure 7.3: National PPP governance



Source: Coordinating Ministry of Economic Affairs (2010)

required to approve demands for government support (guarantees) for the consideration and approval of the Finance Minister (Coordinating Ministry of Economic Affairs 2010).

The government contracting agencies (GCAs) are a type of organisation that plays a key role in the PPP policy development and implementation. Following previous PPP practices and current regulations, the implementation of PPP in Indonesia varies from one sector to another. There follows a discussion of the GCAs in the toll road, seaport, electricity, natural gas and potable water sectors.[18] In the toll road sector, the Indonesia Toll Road Authority (BPJT) is the regulatory authority on toll road PPP development. Its duties include taking over toll road sections that have completed their concession period or where there has been failure to implement the concession agreement. The BPJT then recommends the next operation to the minister, re-auctions its concession, or conducts procurement on toll road investment through a transparent and open auction. In the seaport sector, each port has a different authority responsible for its operation and PPP implementation.[19] The absence of a national port authority means that PT. Pelindo, a state-owned enterprise, is the GCA in obtaining development licences and port operation approval from the Ministry of Transport. The latter acts jointly with the Special Economic Zone administrator as the regulatory authority for granting business permits for the seaport sector. Other sectors, such as electricity, natural gas and potable water, have their own GCAs but most of them are responsible for off-taker issues.

According to this scheme, the government is the central figure in developing national PPP policy, mainly through the National Planning Agency and P3CU. It also plays a key role in PPP policy development in specific industry sectors through the GCAs.

PPP financing scheme

The project financing process involves resources such as the project company, project sponsors, local and foreign commercial banks, the Indonesia Infrastructure Financing (IIF), the Indonesia Infrastructure Guarantee Fund (IIGF), and multilateral development banks. The financing mechanism is divided into guarantees, loans and equities. The project company (also called a Special Purpose Vehicle/SPV), an Indonesian corporation either in the form of a private limited company, a state-owned enterprise, a regional-owned enterprise or a co-operative, is the central figure in the project financing process as it handles this entire process. The project company[20] may consist of project sponsors, either from the private sector, including local and foreign investors, and/or government through

18. As stipulated in the Presidential Regulation No. 67 Year 2005 on Public Private Partnership in Infrastructure Development (revised by the Presidential Regulation No. 13 Year 2010), there are eight types of infrastructure project that can be undertaken in cooperation with the private sector. As yet, only six of them have been implemented as PPP projects.

19. According to Law No.17 Year 2008 on Shipping, although seaport operational business is open to private entities there is no nationally specific organisation playing a key role in it.

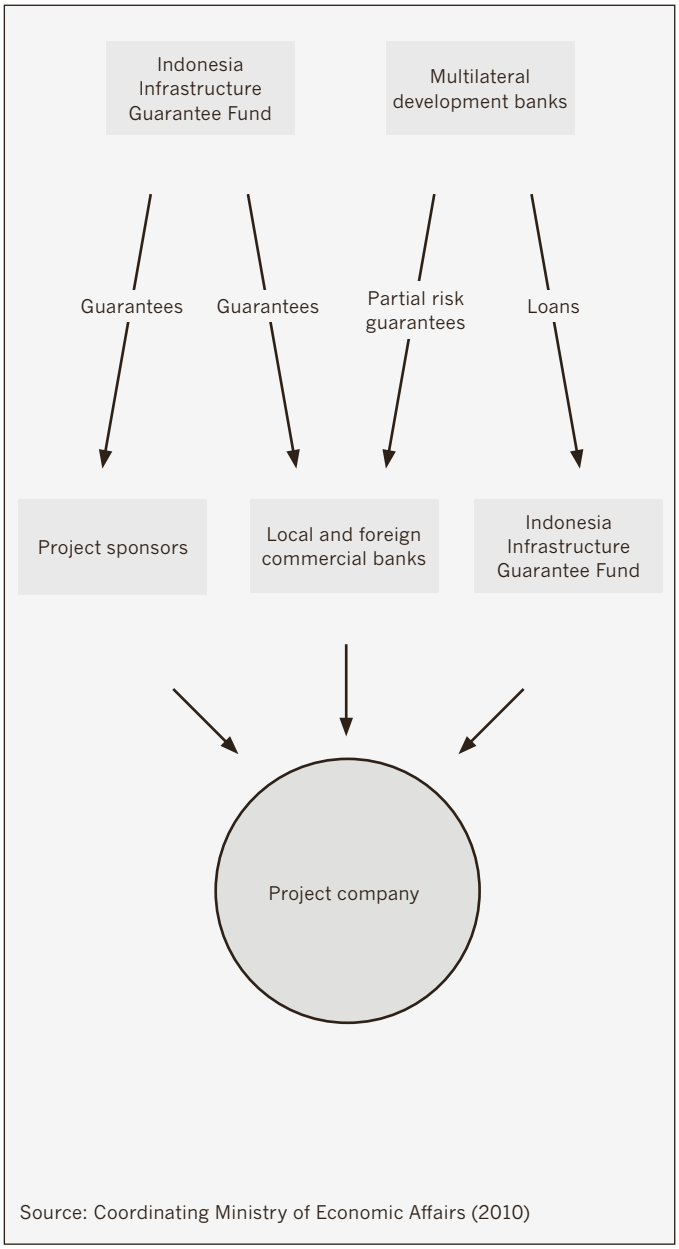
20. In the toll road sector, there are project companies such as PT. Citra Marga Nusaphala Persada, PT. Marga Mandala Sakti, PT. Bosowa Marga Nusantara and many more handling the toll road project, as seen in Table 7.3, where most of them have a major government share. Although the private sector is allowed to invest in the project company, only a few pure private project companies are involved in the toll road business, mainly owing to the lack of financial feasibility of most projects in Indonesia.

state-owned enterprises.[21] Project companies are approved by the government to supply services through a contractual agreement between the GCA and the project company.

The Indonesia Infrastructure Financing (IIF) is an infrastructure-financing enterprise tasked with helping infrastructure development in Indonesia by increasing the availability of equity and long-term debt, particularly in Indonesian currency (the rupiah) for PPP infrastructure investment. The Indonesia Infrastructure Guarantee Fund (IIGF) is a state-owned enterprise responsible for providing a better framework for attracting larger-scale private investment in infrastructure projects. IIGF works as an instrument to protect investors in the infrastructure projects against potential risks that may have an impact on the investment.[22] IIGF can also cooperate with the Multilateral Development Banks under the condition of insufficient resources to provide guarantees. The commercial banks provide funding through loans/credit for infrastructure projects.

The financing scheme used in Indonesia has yet to be evaluated owing to its recent implementation. The large amount of risk that surrounds infrastructure projects in Indonesia seems to be a significant problem for future PPP development. Therefore, the role of IIGF is considered vital. Yet, the framework of IIGF as set up under Presidential Regulation No. 78 (2010) and Ministry of Finance Regulation No. 260 (2010) fails to identify which risks can be taken over by the IIGF and which cannot. The regulation has also failed to identify the limit of IIGF guarantees. Both these problems are likely to open doors to misinterpretation and could pose a threat for future PPP development. The government should look to other countries that have successfully implemented PPP financing schemes, such as India with its viability gap funding (VGF) regulation.

Figure 7.4: The project financing process



Source: Coordinating Ministry of Economic Affairs (2010)

Financing capabilities

Each of the financial resources illustrated in Figure 7.4 has different capabilities. PT. Sarana Multi Infrastruktur (SMI), for example, has a budget of Rp1 trillion to invest in two infrastructure projects (Kontan Online 2010). The government is also committed to increasing the capital to over Rp2 trillion, which is expected to be injected through the 2010 state budget revision. The Rp2 trillion equity, however, will be shared with the company's subsidiaries PT. IIF. The IIF will provide funding towards commercially feasible, mainly private infrastructure projects financed through debt instruments, equity participation or infrastructure financing guarantees for credit

21. In 2009, PT. Sarana Multi Infrastruktur, a state-owned financing enterprise was set up by the government to accelerate infrastructure development in Indonesia through Senior Loans (loan financing for infrastructure projects where PT. SMI acts as senior lender to the project); Subordinated Loan (loan financing for infrastructure projects where PT. SMI act as junior lender to the project); Convertible Loan (a financing scheme with a conversion to equity arrangement at loan maturity date); Equity Investments (a direct investment to infrastructure projects through equity ownership); Contract Financing (a working capital loan to contractors who build infrastructure projects where the disbursement of the loan is based on contracts granted by the project owner); and Invoice Financing (a working capital loan financing contractors who build the infrastructure project, where the disbursement of the loan is based on receivables of the projects).

22. As a state-owned enterprise, IIGF is established by the Ministry of Finance for the purposes of government guarantees on PPP infrastructure development, according to Presidential Regulation No 78 (2010) on *Infrastructure Guarantees on Public-Private Partnership Project through State-Owned Enterprise*. It is designed to be a credible guarantee provider for PPP infrastructure projects risks on the basis of contractual agreements in accordance with Ministry of Finance Regulation No 260/ PMK.011/ 2010 on *Guidelines on Infrastructure Guarantees in Public-Private Partnership*. IIGF is also allowed to obtain a sum of money in return for its services, calculated by considering all the spent cost and a fair amount of profit.

enhancement. The IIF is supported by the equity commitments of its other founding shareholders. Beside the Indonesian government, through PT. SMI, these are the Asian Development Bank (ADB), the International Finance Corporation and the Deutsche Investitions-und Entwicklungsgesellschaft mbH. They can commit to a maximum Rp400 billion, Rp400 billion and Rp200 billion equity respectively. PT. IIF will also receive ADB and World Bank loans each worth the equivalent of IDR 1 trillion, making the total capital invested Rp3600 billion. As for IIGF, the government has invested over Rp1 trillion as a state capital investment in the IIGF through the state budget in 2009 and, owing to the large scale of infrastructure projects, the capability of IIGF to provide guarantees will be enhanced yearly, as by next year another Rp1 trillion will be invested in the IIGF through the state budget for the year 2010, to enhance its capacity (Coordinating Ministry of Economic Affairs 2010).

Currently, the IIGF is in the process of acquiring joint underwriting support from the World Bank worth US$500 million to cover estimated project risks worth US$2 billion, owing to leveraging effects up to four times from the World Bank AAA-rating. National banking, according to Djunedi (2007), is expected to cover 21% of the total amount of infrastructure funds needs, which are expected to reach over Rp1,400 trillion during the years 2005 to 2009. For example, PT. Bank Mandiri is ready to allocate a budget of Rp38 trillion for infrastructure development, while PT. BNI and PT. Bank Danamon are each allocating a budget of Rp23 trillion and Rp3 trillion respectively. Even PT. BRI, which usually services small debtors, is allocating Rp800 billion for toll road loans[23] (PT. Media Data Riset 2010).

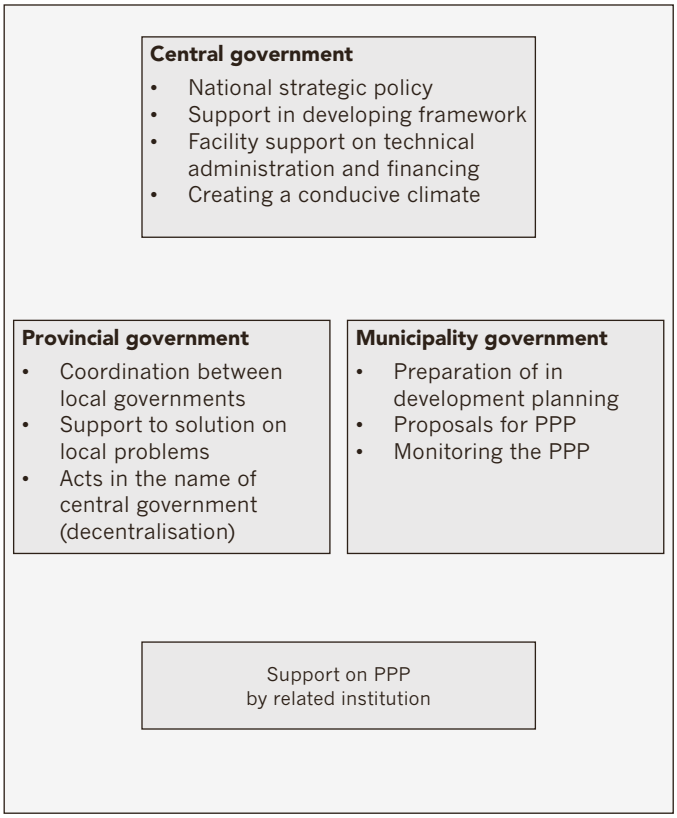
As mentioned above, the financial feasibility of the projects is one of the constraints in PPP infrastructure development. To solve this problem, government participation in PPP financing is needed to improve the financial feasibility of projects and to attract private investors (either national banks or investment companies) through state-owned enterprises.

Local government participation in public–private partnership financing

In Indonesia local government has participated in PPP projects all over the country and in many sectors. Local government can invest in PPP projects through local government-owned enterprises.[24]

The areas of responsibility depend on the level of governance. The central government's remit is policy and strategy development of PPP whereas the local governments' work focuses on the organising and project planning of the PPP. As can be seen from Table 7.4, between 2010 and 2014, local governments are expected to initiate 50 PPP projects, one ready-to-offer project, nine priority projects and 40 potential projects. Although local government is expected to initiate a large number of PPP projects, by project cost it is only expected to initiate US$15.852 billion-worth of projects; compare that with the total value of projects initiated by the central government, which is expected to be in the region of US$31.447 billion.

Figure 7.5: Areas of responsibility for central and local government in implementing PPP



23. PT. Bank Mandiri, PT. Bank BNI and PT. BRI are state-owned companies in the national banking business.

24. Presidential Regulation No.13 Year 2010 concerning Revision on Presidential Regulation No. 67 Year 2005 / *Peraturan Presiden No. 13 Tahun 2010 mengenai Perubahan Peratyran Presiden No. 67 Tahun 2005* and the Interior Ministry Regulation No. 13 Year 2006 concerning Local Government Financial Management / Peraturan Menteri Dalam Negeri No. 13 Tahun 2006 Mengenai Pengelolaan Keuangan Daerah.

Local government participation in PPP project is mainly in small-scale projects owing to limited financial resources. In the future, however, the collaboration between government and local government in PPP funding is expected to increase as there is no regulation opposing this.

Table 7.4: Summary of PPP projects by initiator

No	Sector/subsector		Quantity	Project cost (US$ 000)
1	Project ready for offer			
		Central government	0	
		Local government	1	36,000
2	Priority project			
		Central government	18	8,150,830
		Local government	9	564,070
3	Potential projects			
		Central government	32	23,296,480
		Local government	40	15,251,550
Total			100	47,298,930

Source: State Ministry of National Development Planning et al. (2010).

PPP contractual scheme

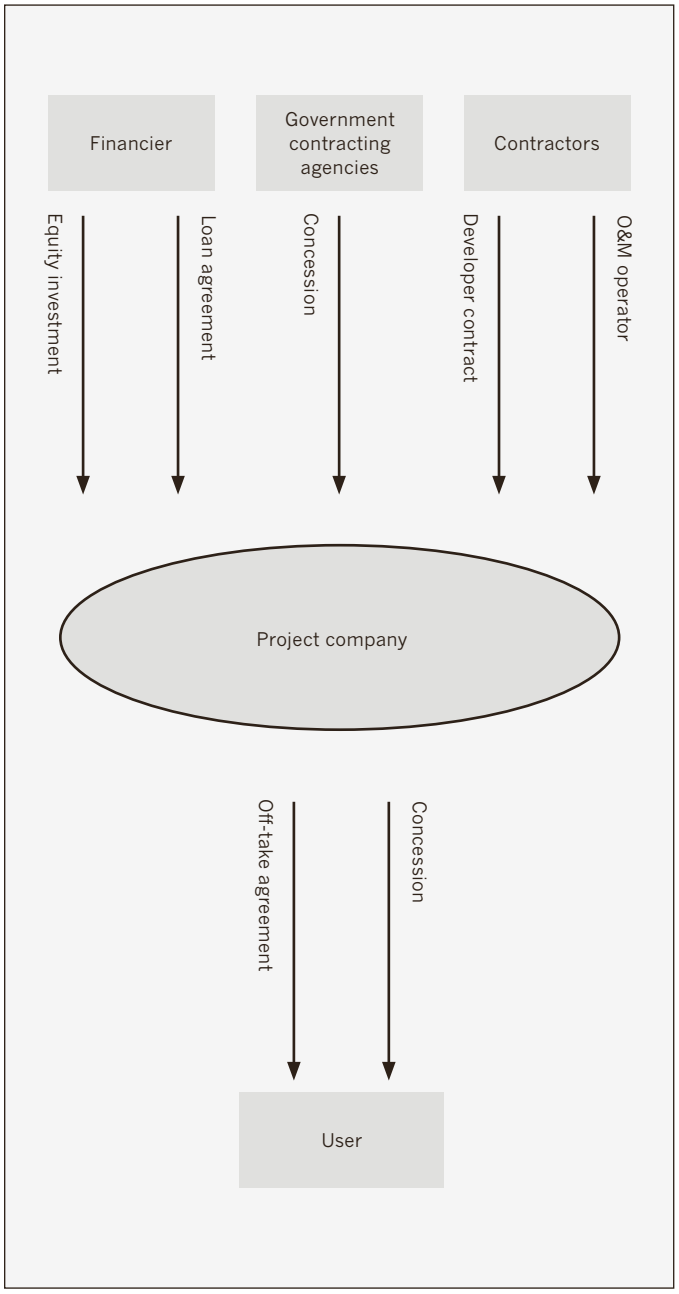
PPP is defined as a contractual agreement between the government, through a GCA, and business entities. Therefore, contractual agreement is an essential part of the PPP process and acts as a basis for PPP projects.

A typical PPP structure can be quite complex, involving contractual agreements between government, financiers, engineers, contractors, operators and customers (Transport Policy & Tourism Section 2008). Based on the Presidential Regulation No.13 Year 2010 concerning Revision on Presidential Regulation No. 67 Year 2005 / *Peraturan Presiden No. 13 Tahun 2010 mengenai Perubahan Peraturan Presiden No. 67 Tahun 2005*, a project company undertakes the project and, therefore, all contractual agreements between various parties such as the government, through GCAs; financiers (Indonesia Infrastructure Guarantee Fund, Multilateral Development Banks, project sponsors, local and foreign commercial banks and Indonesia Infrastructure Fund); contractors (technical engineering, provision, construction and operation and maintenance contractors); and customers will be negotiated between themselves and the project company.

Public accountability

In several countries, the decision to implement a PPP model on a project and the PPP implementation alternatives are based on a value-for-money (VfM) assessment. The traditional VFM assessment determines whether the provision of service and infrastructure can be done more cost-effectively and efficiently by implementing a PPP than through the standard public sector approach as defined by Public Sector Comparator (PSC). This approach is, however, based on assumptions that do not fit the conditions in Indonesia. For example, the traditional VfM assessment is based on the PSC, which implicitly assumes that infrastructure development by the government, or public sector, is a realistic option. This

Figure 7.6: PPP contractual agreement



condition may not apply in Indonesia because of its government's fund limitation and capability (Coordinating Ministry of Economic Affairs 2010). Therefore, the Inter-America Development Bank has recommended an alternative approach to project assessment, which recommends evaluating the top-ranked modality quantitatively, using a financial model to determine which modality yields the highest revenue-constrained project Net Present Value (NPV).

One of the most striking aspects of public accountability in Indonesia is the lack of evaluation and monitoring. The Indonesia toll-road sector is one of the more advanced sectors in PPP regulation in its organisation and project accountability, and has been applying project evaluation and monitoring through regulations, although it is deficient in its implementation. In the toll-road sector, the post-implementation information publication is divided into two parts according to the scope of monitoring. The first part covers monitoring of the toll road by the related ministry and the second part covers the monitoring carried out by the Indonesia Toll Road Authority (BPJT). The related ministry monitors toll road management, development, functions, benefits and performance. The Indonesian Toll Road Authority carries out a periodic evaluation of the six elements of minimum service standards. However, the monitoring reports could not be found. The post-implementation information publication for other sectors have not yet been developed.

CASE STUDIES

This section will give two examples of PPP projects, one representing good practice and the other illustrating the challenges faced. The good-practice example will be represented by the Jakarta Outer Ring Road Section W1 (JORR W1) toll road project and the challenges faced in PPP practice will be demonstrated by the Ungaran potable water project. Different aspects of the case studies will be discussed, such as each project's PPP model, procurement, contractual agreement, financing and public accountability.

The JORR Section W1 PPP Toll Road Project

This PPP scheme was only developed in early 2010 and it is too early to say how it will stand the test of time. Even so, there are several conclusions we can draw from the toll road project with regard to the PPP model chosen, its financial aspects and public accountability. Regarding the implementation of the BOT model in the project, the benefit of the model is that the organisational scheme can be adapted to the latest format recommended by the Coordinating Ministry of Economic Affairs. This can be done by integrating the support from the other financial resources such as PT. Sarana Multi Infrastruktur, the IIGF and the IIF with that from the PT. Jakarta Lingkar Barat as the project company in the organisational scheme. The integration of such a model will ease the project financing by involving more financial resources.

With regard to the financial aspect, the PPP between PT. Jakarta Lingkar Barat and the Indonesian government has benefited the government and the private sector. The government benefited from the PPP through the provision of a toll road that it did not have to finance fully, although some indirect government investment was provided through the minor share of a state-owned enterprise (PT. Jasa Marga) in the project. The private sector will benefit from the profits from operating the toll road, although it will have to carry a big risk burden. In practice this should not pose a problem for the private sector as the risk allocation issue will be taken into consideration by the government in determining the toll road tariff and its adjustment.

With regard to the risk allocations issue in the contractual agreement, although the project is financially feasible, the risk allocation borne by a single party, the project company, might reduce the feasibility of the project if risks materialise. Although the project is now in operation, the experience illustrates the risk allocation problem in the form of project delays that have occurred when specific risks materialised. The risks borne by the project company alone are, however, expected to be compensated for by the high return of the project through tariff adjustment.

With regard to public accountability, the project appraisal, evaluation and monitoring have been carried out according to the relevant regulations. The appraisal and evaluation have been conducted so as to form a framework for the next steps of project development while the monitoring is conducted to ensure that the facility meets the minimum required standard. This shows that the related institutions/organisations outside the project have contributed to good practice in the PPP arrangement, although the information on such studies has never been made publicly available. As for the project evaluation, it is too early to conduct an assessment as the facility has only recently started operating, although it is likely that in the future an evaluation study on the project will be conducted.

The implementation of good PPP practice, such as the publishing of project information, has so far met constraints that could be caused by the lack of awareness about the project's public accountability and the need for information transparency. These deficiencies occurred in the previous government era, when they were considered normal and therefore occurred on many projects, not just PPP projects.

With regard to the procurement process conducted by PT. Jasa Marga, which at the time was the regulatory body for the toll-road sector, it can be seen as an odd process and should not be considered an example to follow in future project procurements, although considering the situation at that time, what the company did was considered as necessary.

The Ungaran Potable Water PPP Project

The Ungaran Potable Water PPP Project has encountered several challenges in its development owing to its unique PPP scheme, awkwardness in the procurement process, unfair risk allocations in the contractual agreement, constraints in project financing and issues related to public accountability. The PPP scheme is unique as it did not establish a project company. The organisations involved in the project are the private company and the government contracting agency. The private partner is required to run the business and carries a larger share of the risks. PDAM of Semarang Regency receives a royalty irrespective of profit or loss, and earns dividends when the business earns a profit. This is an example of an unfair PPP, an arrangement that may result in project failure. This may in future be resolved through the establishment of a project company in accordance with the current PPP regulation. Through the project company, issues related to risk allocation could be resolved by the provision of guarantee funds from IIGF and equities from IIF and SMI, which will involve them as shareholders in order to share the risk allocation borne by the PT. STU. The involvement of those institutions may also increase the interest of other private entities to participate in the project as project sponsors.

The current PPP scheme limits the financial resources of the project and prevents it from developing its business in the future. The Ungaran Potable Water Project is considered a small-scale PPP project and, therefore, may not be too vulnerable to risks. If this kind of PPP scheme is applied to larger PPP projects with financial constraints, it may be more vulnerable to risks as the risks occurring in large-scale projects have higher probabilities and greater impact than in small-scale projects.

The lack of information on the Ungaran Potable Water PPP Project could be due to two factors. First, the government's lack of awareness of the importance of public accountability and information transparency continues as in the previous government era. Secondly, the government may use PPP as a pretext for not publishing documents related to project information because of company information security issues (Yescombe 2007). Those two factors are likely to apply because many earlier government projects in Indonesia showed many deviations in project implementation from the current regulations or contractual agreements. The procurement process could also have encountered several challenges related to political intervention, as there are no independent committees established to evaluate prospective investors.

CONCLUSIONS

The Indonesian government's role in the provision of infrastructure has not diminished. The government continues to play a central role in policy development and maintains control of the implementation of PPP through government bodies such as the National Planning Agency, KKPPI, IIF and the Ministry of Finance. Although the private sector and other partners are expected to finance 69% of the infrastructure projects in Indonesia, the government is still a key player in infrastructure development. This can be seen by the implementation of the modified-BOT model in most PPP projects in Indonesia, where the government participates in the infrastructure financing as the major shareholder together with the private sector as the minor shareholder. In the future, however, the private sector and local government are expected to be more involved in infrastructure financing, in particular with regards to improving projects' financial feasibility. The government's role in PPP implementation can also be seen in the PPP schemes where GCAs and the authorisation and licensing body are the regulatory authorities, responsible for ensuring that projects meet the required standards and are implemented according to their contractual agreements.

REFERENCES

Asia-Pacific Economic Cooperation (2009), *Meeting APEC's Post Crisis Infrastructure Challenge: Towards Commonality in PPP Infrastructure Markets* (Singapore: 16th Finance Ministers' Meeting).

Coordinating Ministry of Economic Affairs (2010), *Public–Private Partnership: Investor's Guide* (Indonesia).

Djunedi, Praptono (2007), *Implementasi Public-Private Partnership dan Dampaknya ke* (APBN: Majalah Warta Anggaran Edisi 6 Tahun 2007).

HLB Hadori Sugiarto Adi and Rekan (2010), *Independent Auditors Report on the Consolidated Financial Statements for the Years Ended December 31, 2009 and 2008 on PT Jasa Marga (Persero), Tbk. and its Subsidiaries* (Jakarta).

Indonesia Toll Road Authority Ministry of Public Works (2008), *Toll Road Investment Opportunities in Indonesia* (Jakarta).

Indra, Pandji Bastari (2009), 'Infrastructure Development in Indonesia', seminar presentation, 15 February, National Planning Agency, Bangkok.

Khanom, Nilufa Akhter (2009), 'Conceptual Issues in Defining Public-Private Partnership', paper presented at the Asian Business Research Conference, Australia.

Kontan Online (2010), <http://www.kontan.co.id/index.php/keuangan/news/10010/SMI-Ditargetkan-Biayai-Dua-Proyek-Infrastruktur>, accessed 8 July 2010.

Law No. 13 Year 1987 on Road (Undang-Undang No. 13 Tahun 1987 tentang Jalan).

Law No. 17 Year 2008 on Shipping (Undang-undang No. 17 Tahun 2008 tentang Pelayaran).

Ministry of Finance (2006), *Regulation No. 38/PMK.01/2006, Guidelines of Risk Control and Management for Infrastructure Provision* (*Peraturan Menteri Keuangan No. 38/PMK.01/2006, tentang Pedoman Pengendalian dan Pengelolaan Risiko dalam Penyediaan Infrastruktur*).

Ministry of Finance (2010), *Regulation No. 260/PMK.011/2010*, *Guidelines on Infrastructure Guarantees in Public-Private Partnership (Peraturan Menteri Keuangan No. 260/PMK.011/2010).*

National Development Planning Agency, Bappenas (2010), *Indonesia: Country Presentation on Public Private Partnership* (Jakarta).

Nippon Koei Co. Ltd. (2007), *Project Formation Study on Surabaya Toll Ring Road Construction Project* (Japan: Engineering and Consulting Firms Association).

Presidential Regulation No. 78, Year 2010, on Infrastructure Guarantees in Public-Private Partnership through Indonesia Infrastructure Guarantee Fund (Peraturan Presiden No. 78 Tahun 2010).

Presidential Regulation No. 67 Year 2005 (Peraturan Presiden No. 67 Tahun 2005 juncto).

Presidential Regulation No. 13 Year 2010 (Peraturan Presiden No. 13 Tahun 2010) on Public Private Partnerships in the Provision of Infrastructure.

Presidential Regulation No. 13 Year 2010 Concerning Revision on Presidential Regulation No. 67 Year 2005 (Peraturan Presiden No. 13 Tahun 2010 tentang Perubahan atas Peraturan Presiden No. 67 Tahun 2005).

Presidential Regulation No. 8 Year 1990 on Toll Roads (Peraturan Presiden No. 8 Tahun 1990 tentang Jalan Tol).

PT. Media Data Riset (2009*), Profil Proyek Jalan Tol Status KPS di Indonesia Tahun 2009.*

State Ministry of National Development Planning/National Development Planning Agency (2010), *Public–Private Partnership: Infrastructure Projects in Indonesia 2010–2014*, (Indonesia).

Transport Policy and Tourism Section, Transport and Tourism Division, United Nations Economic and Social Commission for Asia and The Pacific (2008), *Public Private Partnerships: A Financier's Perspective* (United Nations Economic and Social Commission for Asia and The Pacific).

Yescombe, E.R. (2007), *Public Private Partnerships: Principles of Policy and Finance* (Oxford: Butterworth-Heinemann).

8. Current status and perspective of private finance in Japan

Masamitsu Onishi and Kiyoshi Kobayashi, Kyoto University

INTRODUCTION

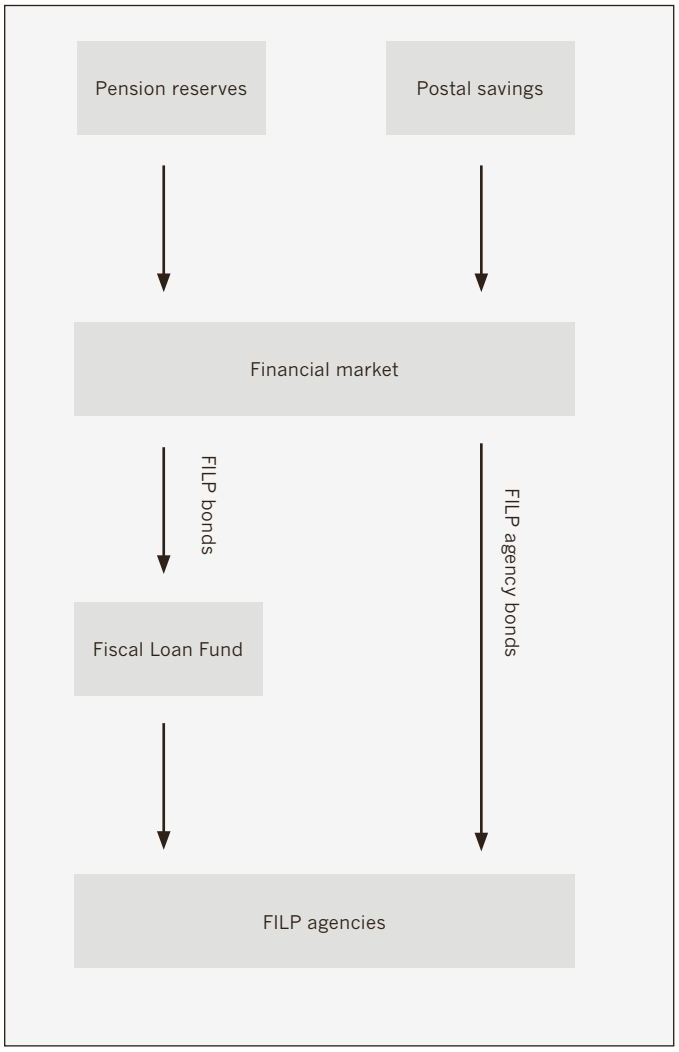
This chapter provides an overview of private finance for public service provision with specific reference to Japan's private finance policy development and experience with private finance models. Any explicit and implicit institutional arrangements are history dependent in the sense that they are affected by the overall social and political context. This chapter investigates how the current private finance policy and practice in Japan have been formed under the influence of the social and political context. It examines data and cases that support the argument that the Japanese Private Finance Initiative (PFI) has been driven by a motivation of the government and industries toward additionality to public finance rather than value for money in terms of cost and quality. Few projects have been implemented that have the potential for financial benefits that could be exploited by the private sector's ability and effort. A case of bankruptcy of a PFI project showed that the government's lack of capability in assessing the ability of the candidate private operator could lead to the failure of PFI implementation. The new public accounting model for local municipalities launched in 2008, in which the government's commitment to long-term payment is treated as on the balance sheet might give the government a negative incentive towards extensive application of 'additionality-driven' PFI. Nonetheless, the Democratic Party of Japan (DPJ), in powr since 2009, is committed to an extensive use of PFI for public procurement. Japan is now facing the challenge of implementing PFI.

SOCIAL AND POLITICAL CONTEXT

Mobilising private capital for public investment is not a recent development in Japan. The first model of public service provision with private finance was a joint venture between the public and the private, called the '*third sector*', which was introduced in 1913. A steam shipping company in charge of shipping transportation between the main island of Japan and the isolated Sado Island was established with the sponsorship of the Niigata prefecture and three private shipping companies.

The Fiscal Investment and Loan Programme (FILP), *Zaisei Toyushi*, played a significant role in developing both infrastructure and politically important industries in the post-war reconstruction period. Under the FILP the government provides loans to politically necessary projects such as national highways and airports, where it is difficult to raise private funds. Users of infrastructures such as national highways and airports can easily be identified. The fact that users of these infrastructures could be charged for such use has made it possible to use the FILP for infrastructure development. The FILP is a form of government intervention in the financial sector to complement the private financial sector's role (Iwamoto 2002). As shown in Figure 8.1, before the fundamental reform in 2001, the main financial resource of the FILP was postal savings and public pension reserves.

Figure 8.1: The post-reform FILP system



The FILP is expected to achieve a reduction in the tax burden. In addition, because the agencies are required to repay loans, it is expecte d that they will care about profitability, which will lead to project efficiency. In fact, the 2001 reform disconnected the postal saving and public pension reserves from the FILP owing to the excessive size of the FILP and the huge money flow inside the government (Iwamoto 2002). Instead of these reserves, the FILP bond,[25] which is issued by the newly formed Fiscal Loan Fund, is used to raise funds. After the 2001 reform, the FILP set up FILP agencies, whose activities include expressway construction, airports, water supply and sewers, and regional development projects.

25. As the FILP bond is backed by the national government, it is regarded as the de facto national debt.

The financial resource of the FILP was also mobilised to establish third-sector companies. Joint venture companies, called third-sector, were regarded as state-led companies that were closely related to the national policies of that time. The third-sector model was a result of the public sector's active role in developing the national industry through its broader intervention in extensive private areas. The government played a role as a capital supplier to the private sector rather than as a capital demander in the public domain or the private domain, where projects tend to be profitable. Major infrastructures such as national highways, national railways, ports and airports were developed and operated by companies owned by the national government, which could raise funds with national credit. Private involvement in such major infrastructures was not common. This scheme allowed the government to meet the growing demand for public services.

Such aggressive national investment resulted in a considerable national deficit. When the Liberal Democratic Party government came to power in 1976, fiscal reform was a crucial issue of economic policy in Japan because the fiscal policy aimed at 7% annual growth. As the Ohira cabinet had had to give up introducing a consumer tax policy, the next, Suzuki, cabinet took the 'fiscal reform without tax increase' approach. As a result, from 1982 to 1988 annual growth rates of subsidies for public works were negative. The Plaza accord[26] in 1985 brought about a strong Japanese Yen, and the Nakasone cabinet eventually took the approach of domestic demand-led recovery. In contrast with the earlier stage, the government confronted a dilemma between the need for economic stimulus and a constraint in raising funds due to the excess deficit. It was in these circumstances that the idea of mobilising private finance as an alternative financial source for public enterprise projects was born in the 1980s.

Models of this type are projects of the urban and regional development industry and leisure and tourism industry. The third sector in the 1980s was driven by the government's expectation that the private sector would act not only as a capable operator but also as a funding source. In practice, the government had faced criticism because many such projects had made considerable deficits that were supposed to be covered by the government. The key deficiency of the third-sector approach is the lack of governance due to ambiguity around risk sharing. The private sector expected the government to reimburse deficits if a project failed. Such an expectation gives less incentive to the private sector to operate efficiently.

The collapse of the bubble economy was decisive for the loss of the third-sector model's attractiveness, which meant that many third-sector companies went bankrupt. Blurred lines of responsibility between the public and private sectors created a serious moral hazard problem for both the private and public sector. There are two main reasons for the failure of the third-sector approach (Akai 2006):

- lack of clarity in risk allocation between the public and the private sectors
- low transparency of third-sector companies, that is, those regarded as organisations outside the control of the public sector.

The use of the third-sector model became limited to areas such as local railway services, which cannot make a profit from user payments alone.

At the same time, in the early 1980s, the considerable deficit of the national railway companies was revealed. Because these state-led companies were owned by the public sector, their deficit could be covered by general tax or additional debt issue. The revelation of the deficit in these companies made the nation aware of their lack of governance in achieving operational efficiency, owing to public ownership. Privatisation has the effect that the government is not responsible for bailing out failing companies. Therefore, the primary objective of privatisation in Japan is to provide more effective governance rather than to overcome difficulties in raising funds.

EMERGENCE OF PFI

Since the bubble economy's collapse around 1990, the Japanese economy has suffered a severe recession. The Japanese government implemented economic measures, including expansion of public investment, which eventually led to the official declaration of a fiscal crisis by the Ministry of Finance in 1995, owing to the heavy burden of the fiscal deficit. Since then, the Japanese government has applied an austerity economic policy that has led to a decline in public investment. A loss in tax revenues due to the rapidly ageing society has contributed to the difficulties for the government in raising funds for public works.

Under these circumstances, the government started to discuss PFI, which was becoming popular in the UK at that time. PFI was recognised as an alternative to the third-sector model that would overcome the lack of governance. In the early reports on PFI, it is insisted that PFI is a model for accessing private capital for developing public facilities without causing moral hazard in the private sector as it requires an agreement for clearly defined risk allocation between the public and the private sectors.

26. An agreement between the governments of France, West Germany, Japan, the United States and the United Kingdom to depreciate the US dollar in relation to the Japanese Yen and the German Deutschmark by intervening in currency markets.

The report *Nikkenren Vision*, published by the Japan Federation of Construction Contractors in 1996, was the first step towards introducing PFI in Japan. The report was written against the background of the construction industry's need for further opportunities to undertake public works. The Japanese government also tried to stimulate the recession economy under the austerity economic policy regime. Public discussions, led by the central government, about introducing PFI to Japan started in 1997. The government decided to cut 15% of expenditure for public works as one of the policies of national fiscal reform. In 1997, the Ministry of Construction and the Ministry of International Trade and Industry established task force groups consisting of academics and practitioners from relevant industries. A task force organised by the Japan Project Industry Council was influential in informing PFI policy development from the private sector's perspective. The Liberal Democratic Party government started discussions aimed at introducing PFI, which had been developed in the UK at that time, as a new public procurement system in the emergent economic policy plan.

In studying the process of PFI introduction, it emerged that the UK model was inconsistent with legislation in Japan. The PFI model in Japan had to be modified to be consistent with Japanese law. The issue of ownership was one of the key considerations. In the UK, the build–transfer–operate (BTO) model, under which the government has the ownership of facilities during the operation period, is not permitted because this is interpreted as a deferred payment for construction. The UK government permits only the private ownership of facilities (Ryrie Rule). In Japan, by contrast, private ownership and administration of legally defined public assets are not permitted under the legislation on the administration of public assets. Eventually, the task force allowed the BTO model to be included in PFI in Japan. Since then, it has been claimed that the resulting PFI Act (see next section) is an obstacle to applying PFI for the operation of infrastructure facilities. The discussions before the enactment of the PFI Act focused on how to implement PFI within the existing legal framework rather than exploring how value for money could be obtained through PFI.

Although the official objective of using PFI was to achieve economic efficiency, the real reason behind PFI introduction in Japan was the need for an alternative financial resource other than public capital to meet the demand for public services. It should be noted that the construction industry was one of the influential interest groups active in the course of PFI policy development. The public accounting treatment of PFI does not seem to have been raised as a topic of debate at that time.

DEVELOPMENT OF PFI IN JAPAN

Shaping the PFI business model

The development of Japanese PFI began in July 1999 when the Act on the Promotion of Public Facilities Development in Use of Private Finance (*Minkan shikin tou no katsuyou ni yoru koukyo shisetsu tou no seibi tou no sokushin ni kansuru houritsu*) was legislated under the LDP government. This Act is commonly referred to as the PFI Act although PFI in Japan does not mean a specific model such as that to which the term applies in the UK.[27] In Japan, PFI is referred to as a scheme and the basic principles are stipulated in Article 3 of the PFI Act:

- greater involvement of private enterprises with the aim of achieving appropriate allocation of roles between the state, local governments and private enterprises and efficient use of public financial funds, and
- exploitation of the private sector's managerial capabilities, ingenuity and innovative ideas.

The PFI Act defines the purpose of PFI, the applied areas, the procurement process, the legal actions for promoting PFI, and instalment of the PFI promotion committee under the Cabinet Office. Soon after the enactment of the PFI Act, the Cabinet Office, which plays a central role in setting up the shape of the Japanese PFI model, published basic policies on implementing PFI projects, stipulating specific principles for PFI projects. These are:

- **openness:** PFI projects must have a public accountability
- **use of private capability resource:** PFI projects must use private financial resource, and private technological and managerial capability resource
- **efficiency:** PFI projects should be made efficient and effective by respecting the private sector's autonomy and innovation
- **equality:** the process that assesses the appropriateness of PFI adoption and the process for selecting the successful bidder must guarantee equal treatment of all parties
- **transparency:** the whole process from the idea development stage to the end of contract period must be transparent
- **objectivity:** each assessment process must be objective
- **contractualism:** in an agreement between the government and the private company, the roles and responsibilities of each party to the contract must be clearly defined

27. In the UK, PFI is defined as a specific model whereby the government pays a service fee to the private company concerned.

- **independence:** entities undertaking PFI projects must be independent from their parent company in both legal structure and accounting.

The following standardised guidelines have been published by the Cabinet Office:

- Guideline for a process of implementing PFI projects (2008)
- Guideline for risk allocation in PFI projects (2001)
- Guideline for VfM (2008)
- Guideline for PFI contracting (2003)
- Guideline for monitoring PFI projects (2003).

Some local governments at prefecture and municipality level have developed their own guidelines; many of these are similar to those published by the Cabinet Office but some are more detailed than the Cabinet Office guidelines. Ministries in charge of procurement using PFI, such as the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) have published their own guidelines or manuals for specific types of projects. MEXT has published a manual for projects for seismic reinforcement of publicly owned school buildings. MLIT has developed software to calculate the value for money of business cases.

Application areas

As of 2010, 366 PFI projects had been publicly announced in Japan since 1999. The annual number of announced PFI projects is 40 to 50, a figure that has remained constant since 2002. The annual total value of announced PFI projects has been approximately Y30 billion since 2005. PFI projects contribute approximately 1.5% of new total public fixed asset formation, which is significantly less than in the UK where 10% of public projects in terms of value are implemented by PFI. Areas where PFI has been adopted include educational and cultural facilities (31%), funeral parlours and waste treatments (19%), public buildings and accommodations (19%), and car parks and social housing (11%). As will be explained below, a dominant PFI model is one in which the private sector is involved only in designing, constructing and maintaining buildings but not in their operation, which may not bring substantial value for money. Major infrastructures such as roads, railways and rivers have not been procured by PFI as the legislation on the administration of public assets does not allow for private sector administration of areas under government control, though the interpretation of the legislation is controversial.

ISSUES OF JAPAN'S PFI

'Hakomono' PFI – poor opportunities for value for money

A specific feature of PFI in Japan is the fact that the dominant model is one in which private companies are usually involved only in the design, construction and maintenance of PFI project facilities. Private companies are rarely involved in the operation of PFI projects facilities and, even when they are involved, their involvement is generally limited to minor aspects of the operation of the PFI projects facility. Such PFI projects are referred as *hakomono* PFI projects. The main task of private sector is just to create building shells and to maintain them. Therefore, *hakomono* projects rarely offer opportunities for private companies to use innovative technologies. Higuchi (2006) estimates that approximately 85% of PFI projects begun up to 2006 could be characterised as *hakomono* PFI projects.

Less involvement of private companies in the operation of PFI projects implies that they have less opportunity to enhance value for money by applying the innovative technologies that differentiate these companies from the public sector. Therefore, in theory, *hakomono* PFI projects are not attractive in terms of exploiting the potential value for money. The efficiency principle is clearly stipulated in the PFI basic policy. The dominance of *hakomono* PFI projects raises a question as to whether the efficiency principle has been respected in practice.

Inappropriate assessment of value for money

Considering the disadvantages of PFI, ie expensive cost of capital and of transactions, it would be difficult to argue the business case for using PFI for *hakomono* projects . This raises the question of why *hakomono* PFI projects are dominant in spite of this. As long as we assume that the government sees PFI as an alternative model of fund raising under the austerity economic policy regime, we may infer that it might be motivated to manipulate the business case to justify PFI.

The value-for-money assessment is a key process in determining a potential PFI business case. The first edition of the guideline for such assessments was published in 2001 and revised in 2010. It provides a basic rationale for conducting a public project by PFI. This guideline provides a method for quantitative assessment rather than qualitative assessment, on the basis that the quality of service provided by the private enterprise should be equal to the quality provided by the public sector. Therefore, although cost savings are merited as a source of value for money, the guideline does not provide clear instructions on how to calculate PFI life-cycle cost (LCC). It only mentions that the basis of LCC for a PFI project must be clearly assessed by employing consultants or by conducting surveys of similar projects, or conducting market surveys. Profitability and the financial plan of a

Special Purpose Vehicle (SPV))[28] must also be taken in consideration. If a project is planned in an area for which there is no track record on which to base a business case, assessment will be vulnerable to manipulation. Even if there are such track records, the reliability of those ex-post assessments of value for money is dubious. According to Higuchi (2006), most of those running the PFI projects in Japan were told that a considerable proportion of the value for money was realised by the procurement of services through PFI. But this reduction in prices is speculated to have arisen because general construction companies no longer participate in scandalous illegal bid-rigging. In fact, a reduction in prices has also been observed for projects procured by traditional methods. In addition, many general construction companies complain that they cannot gain sufficient profits from the PFI projects, partly because of extremely low pricing caused by excess competition (Higuchi 2006). If the government refers to such track records when making the business case for future PFI projects, it could lead to overestimating their value for money.

Transparency

The government neither commits to disclosing business cases for PFI nor forces local government to disclose, though the guideline encourages doing so. A survey conducted by the Cabinet Office in 2008 shows that the rate of value for money, ie the ratio of cost reduction against the public sector comparator (PSC), was disclosed in 88% of PFI projects. In more than 60% of PFI projects, PFI LCC was calculated by just multiplying a constant ratio with the PSC, which the public suspected was an arbitrary figure. In fact, the reason for using this constant ratio was disclosed in only 1.3% of the projects covered in the survey. In 2008, a report by the Ministry of Internal Affairs and Communications (MIAC) on the assessment of PFI policy gave an opinion about improving objectivity and transparency. The 2010 revision of the value-for-money assessment guideline encourages estimating by accumulating unit costs and discourages the easy application of a constant ratio to the PSC. MIAC also pointed out public officers' lack of knowledge about value for money assessment. There have been cases where public officers did not check the assessment reports prepared by a consulting company. This implies that there are cases where value for money has been disregarded in the business case process.

Accounting treatment

As far as the authors know, a special guideline for accounting treatment of PFI has yet to be published. Article 86 in the Constitution of Japan states that the Cabinet shall prepare and submit a budget for each fiscal year to the parliament (Diet) for its consideration and decision. This is called the annual decision principle of the budget. In practice, because the period of the state obligation does not necessarily coincide with the period of a fiscal year, the Public Finance Act allows a legal obligation to be fulfilled over multiple years under the authorisation of the Diet. As a PFI agreement typically involves a commitment of payments over several decades, the government has to seek an authorisation from the Diet to commit to the payments for multiple years. The Public Finance Act regulated the maximum period of this commitment as five years, but the PFI Act allows 30 years' commitment for PFI projects. The reason that the Public Finance Act limits the maximum commitment to five years is to avoid the possibility that there will be a failure to deal with unforeseen fiscal demands. It also allows a certain level of fiscal flexibility in the future.

Misumi (2005) points out that in recent fiscal years the trend has been towards an increasing ratio of planned expense to the maximum limitation amount of the State obligation commitment, although the latter does not itself seem to increase. In addition, the ratio of the State obligation commitment for PFI to the total amount of committed expenditure also shows an increasing trend. Deregulation of the maximum period for the State obligation commitment would put a heavier burden on the state obligation in the future, as the PFI becomes more pervasive.

Although there is no special guideline for the public accounting treatment of PFI projects, the method can be understood by applying the public accounting treatment of the State obligation commitment, which is provided in *The Guideline of Public Accounting for Local Governments,* published by the MIAC (2008).

Whether the obligation is regarded as a decisive debt or not depends on the type of PFI project. The obligation is regarded as decisive only if the service fee is separated into two parts: capex (capital expenditure) and opex (operation expenditure), under the BTO model. As the BTO model requires ownership transfer from the private company to the government when construction is complete, the debt obligation also comes into effect at that time. Another condition necessary to make the debt obligation decisive is that the price of the facility should be determined. If the service fee is determined on the unitary payment basis, however, the price of the facility does not become clear. Therefore, the obligation of long-term payment is regarded as on-balance sheet only under the BTO model with non-unitary payment. In the other cases, the obligation is off-balance sheet but the maximum limited amount of the obligation commitment must be noted as a special notification. In addition, even if the obligation has already been made, the obligation is treated as a contractual debt (Ministry of Internal Affairs and Communications (MIAC) 2008).

28. A Special Purpose Vehicle is a vehicle established solely for undertaking a specific project.

Lack of governance – risk-free lender and government monitoring

An important case of failure in PFI implementation is the bankrupt project of the Thalassotherapy facility of Fukuoka City, a user-payment project that was the third PFI project in Japan. Eventually, the bankruptcy of the project caused a four-months-long interruption of service provision. The main sponsor of the project was a medium-sized construction company. In 2006, the sponsor company went bankrupt owing to its heavy burden of PFI project deficit. In this project, there was an agreement that Fukuoka City had to buy out the facility at a price high enough to cover the amount of senior loan in the case of contract termination. Therefore, the senior lender did not take the risk of financial deficit. In addition, all risks related to this project were passed through to the sponsor company, to which was delegated the operational work as well. One of the problems of its governance failure was that the risk-free lender was not motivated to monitor the operational management of the SPC. The second defect of this governance structure was insufficient monitoring by the government of the managerial capability of the candidate bidder. The winning bidder overestimated the demand for the facility in order to gain the contract, which eventually resulted in too heavy a burden of demand risk when users did not materialise in the expected numbers. In addition, Fukuoka City did not request bidders to submit their financial condition so that it could assess whether the bidders had enough capacity to bear the demand risk. Fukuoka City did not know the financial structure of the SPC and the financial health of the sponsor company. Thus, even after reporting the financial deficit of the project, Fukuoka City had an expectation that the lender would intervene to continue operating the project. Eventually, as Fukuoka City did not prepare an action plan and institutional arrangement that would prevent interruptions in service provision should the project become bankrupt, the service was not provided for four months. According to Higuchi (2006), cases where the senior lender does not take any risks are not rare. All risks are passed on to contractors and the senior lender arranges an agreement for the government's buy-out at a price covering the loan amount.

Nominating process

The government and bidders are not allowed to have one-to-one communication during the bidding process. This prohibition of communication hinders the possibility of making the most of the know-how and innovation of the private sector. In addition, bidders are required to spend considerable sums on preparing the bidding documentation, including the design of the facility, which will have been in vain in the case of an unsuccessful bid. Therefore, bidding costs are a source of risk for, and a disincentive to, potential bidders.

RECENT DEVELOPMENTS RELATED TO PFI

Having gained some experience with the PFI process, both the private and public sector realised the need for further improvement of PFI policies. A recent influential report from the public sector is the one published by MIAC in 2008 on the assessment of PFI policy, which makes the following observations.

- The objectiveness and transparency of value for money is not sufficiently assured.
- Both the public sector and private sector are overwhelmed with determining the appropriate allocation of the various risks.
- Monitoring of PFI projects has not been conducted adequately by public bodies.
- Adequate consideration has not been given for companies to demonstrate creativeness and appropriate technology and to simplify the bidding process for private companies.

The attitude of this report towards PFI is not negative but it raises several concerns about the implementation of PFI in practice.

Looking at the recent trend in PFI, this would seem to be downwards for both project numbers and total value. The private sector has raised concerns about the diminishing attractiveness of PFI, from its own perspective, owing to the above issues. The amount of debt of both the national government and the local governments has kept growing. Though Japan experienced a change of political power from the Liberal Democratic Party to the Democratic Party of Japan (DPJ) in 2009, the DPJ government has succeeded in making PFI a key policy for its economic growth strategy. The government has announced several measures for promoting PFI further. Firstly, the government has set a target of doubling the value of public investments procured by PFI by 2020. Secondly, the government has referred to promoting the concession model, whereby the government provides the private sector with a concession to operate and develop public assets that are chargeable to users, such as toll roads and railways, without transferring the ownership of these assets from the public to the private sector. The introduction of the concession model is interpreted as a deviation from relevant legislation that so far has constrained the private operation of public assets. Thirdly, the nomination process for successful bidders has been revised so as to provide incentives for private sector entities to participate in biddings and to innovate. Fourthly, support for local governments has been enhanced to promote PFI in relatively small municipalities. This includes developing a database for information sharing about PFI cases implemented by local governments and providing appropriate advice to local governments. Fifthly, more transparency will be promoted.

Transaction cost reduction – PFI without SPC

The establishment of the SPC is important for project stability by securing both independence from the sponsors and transparency. It requires considerable expense, however, and this is regarded as a transaction cost that hinders the promotion of relatively small-scale PFI projects. An emerging model of PFI in Japan is one without the instalment of an SPC (Special Purpose Company), despite the principle of independence provided in the basic policy. This model is applied in order to save the cost of establishing the SPC. The background to the emergence of this model is a continuous trend of decline in the numbers of applicants for PFI project biddings. If the need to establish an SPC can be avoided, it is expected that more private companies will be interested in participating in PFI projects, particularly in smaller-scale ones. The absence of an SPC will, however, make it more difficult to secure managerial independence and transparency. Despite the disadvantages of this model, the Cabinet Office's Annual Report (2010) regards it as permissible to promote small-scale PFI projects with small initial investment while deploying measures to alleviate the disadvantages of this model, of which examples are shown in Table 8.1.

According to the survey conducted by the Cabinet Office, the PFI model without SPC creation is likely to be seen in projects for car parking/bicycle parking and the rehabilitation of air conditioners. The 2010 Cabinet Office Annual Report concludes that this model may be beneficial for projects with little initial investment and simple operation tasks. The private companies are likely to have a stronger anxiety than the public authorities about not installing the SPC. Therefore, when applying this model, the public authorities should be concerned about the following issues:

- the need to structure each scheme with clear task and responsibility allocation
- flexible consideration for financial procurement
- the specification of a clear statement of risk and its allocation
- monitoring for stable operation of the project.

The private companies are also required to set up special arrangements for compensating for the lack of independence and transparency through measures such as, for example, financial procurement and clarification of risk management.

Table 8.1: Measures for alleviating disadvantages of PFI without SPC

Subject of measurement	Comments of public sector	Comments of private sector
Stability	Securing joint and several surety that can succeed a project appropriately	Administration of finance and management by the lenders Monitoring by the third party Purchasing performance bond Collaboration with financial support company Securing surety
Independence in management	Clear statement on the role of group members	Instalment of a special purpose division in a company Establishing an independent accounting sheet
Risk	–	Making an agreement on risk allocation and independency with a consortium
Project continuity	Requiring submitting a method to secure project continuity to the private company	Securing a back-up service Inviting substitute companies based on the direct agreement between the public authority and the lenders
Management of self-monitoring	Monitoring by accountants and report submission	Outsourcing of self-monitoring Monitoring by an independent division within a company Instalment of a management board

Source: Cabinet Office (2010).

CONCLUSIONS

The use of private finance for public service provision is not a recent development in Japan. Particularly from the 1980s, when the government was constrained by a considerable public deficit, the third-sector model was used to access private capital as a complementary funding resource for public projects, which eventually caused moral hazard in the private sector owing to ambiguous risk allocation. PFI was expected to be an alternative model for enabling access to private capital, which overcomes the shortage of the third-sector model as it provides clear allocation of risk between the public and the private sectors.

Japan's PFI has seen constant growth for the last decade. At the same time, those experiences have left several challenges in exploiting a 'real' benefit of PFI. As we observed, Japan's PFI of the first decade of the present century has been driven by the merit of bringing additionality to public finance, rather than economic efficiency. It was distorted by the inappropriate off-balance sheet accounting treatment and a value-for-money evaluation method that was vulnerable to manipulation. Eventually, *hakomono* PFI has become a dominant model and it is not likely to result in value for money. In fact, because such a *hakomono* PFI has been treated as on balance since 2008, this type of PFI has become less attractive even for the public sector. In such circumstances, the national PFI policy is moving in a new direction in order to exploit the 'real' PFI benefit.

The direction of the current national PFI policy development can be summarised in the following four points. Firstly, the government aims to be less dependent on the type of projects it has to reimburse. As the dominant *hakomono* PFI projects are treated as on-balance sheet, the government has begun to seek a new model chargeable to users, which in Japan is currently referred to as a concession. Secondly, the government aims to exploit value for money in terms of both cost and quality by fostering further delegation of operational works, as so far there have been few projects with room for the private sector to apply new technologies. In particular, delegating the operational work for infrastructures such as roads was constrained by the legislation relevant to public assets administration. Discussions on the deregulation of those constraints have begun. Thirdly, measures for the reduction of transaction cost will be taken. One of the measures is a model that does not require the instalment of an SPC. Although this model is still primitive, it deserves to be tried, and for its applicability to different types of project to be considered. The revision of the nominating process is also a policy aimed at reducing transaction costs, though it may also need revision of the legislation relevant to public procurement. Finally, the most important factor for a successful PFI is that the relevant players should have a correct understanding of the nature of PFI. As the above-mentioned case of bankrupt PFI shows, relevant players, particularly the public sector as a monitor of projects, have to acquire enough knowledge and ability to assess the stability of the governance structure of projects and to identify the potential risks that may arise from the opportunistic behaviour of private companies.

REFERENCES

Akai, N. (2006), *Gyousei Sosiki to Governance no Keizaigaku (Economic Analysis of Public Organization and Governance)* (in Japanese) (Tokyo: Yuhikaku).

Cabinet Office (CAO) (2001, revised 2008), *PFI jigyo jisshi purosesu ni kansuru gaidorain (Guideline for a process of implementing PFI projects)* (in Japanese) (Tokyo).

Cabinet Office (CAO) (2001), *PFI jigyo ni okeru risuku buntan tou ni kansuru gaidorain (Guideline for risk allocation in PFI projects* (in Japanese) (Tokyo).

Cabinet Office (CAO) (2008), *VfM (Value for Money) ni kansuru gaidorain (Guideline for VfM)* (in Japanese) (Tokyo).

Cabinet Office (CAO) (2003), *Keiyaku ni kansuru gaidorain – PFI jigyo ni okeru ryuui jikou ni tsuite (Guideline for PFI contracting)* (in Japanese) (Tokyo).

Cabinet Office (CAO) (2003), *Monitaringu ni kansuru gaidorain (Guideline for monitoring PFI projects)* (in Japanese) (Tokyo).

Cabinet Office (2010), *PFI ni Kansuru Nenji Houkokusho (PFI Annual Report)* (in Japanese) (Tokyo).

Higuchi, T. (2006), 'Project Finance – Legal Issues of Project Finance in Japan', *Japan Business Law Review*, 1 (1): 51–5.

Iwamoto, Y. (2002), 'The Fiscal Investment and Loan Program in Transition', *Journal of the Japanese and International Economics* 16: 583–604.

Japan Federation of Construction Contractor (1996), *Atarashii sougou kensetsu gyo no kakuritsu wo mezashite (Towards the establishment of new construction contractors industry)* (in Japanese) (Tokyo).

Ministry of Internal Affairs and Communications (MIAC) (2008), *Chihoukoukyoudantai zaimusyorui sakusei ni kakaru kijun model oyobi chihoukoukyoudantai zaimusyorui sakusei ni kakaru soumusyou housiki kaitei model ni kansuru Q&A* (in Japanese) (Tokyo).

Misumi, M. (2005), 'Kokko saimu futan kouini okeru weight wo masu PFI' ('Increasing occupation of in the State obligation') (in Japanese), *Keizai no Prism*, (Tokyo: House of Councillors), 12: 9–17.

9. Understanding Malaysia's public private partnership

Khairuddin Abdul Rashid, International Islamic University

THE NATIONAL DEBATE ON PPP

Since the 1960s, Malaysia has planned her socio-economic growth and development principally through successive five-year development plans, otherwise known as the Malaysia Plan. The *First Malaysia Plan* was introduced in 1966 (1966–70), and in 2010 the *Ninth Malaysia Plan* (2006–10) came to an end. Each Malaysia Plan stipulates the policies and strategies, macro-economic and sectoral targets, detailed public sector programmes, and development allocation by sector and level of government. It is within the context of the successive Malaysia Plans that Malaysia introduced and implemented the public private partnership (PPP), see Table 9.1.

There are two components of the Malaysian PPP, Privatisation and Public Finance Initiative (PFI) (3PU[29] 2010). Privatisation started in 1983, while PFI was first introduced in 2006. In practice, the terms PFI and PPP have often been used interchangeably. The government's definition of privatisation is relatively broad: privatisation refers to the transfer to the private sector of activities and functions that have traditionally rested in the public sector (EPU 2006).

PFI is defined as:

> *the transfer to the private sector of the responsibility to finance and manage a package of capital investment and services including the construction, management, maintenance, refurbishment and replacement of a public sector asset...which creates a stand-alone business. The private sector will create the asset and deliver a service to the public sector client. In return, the private sector will receive payment...commensurate with the levels, quality and timeliness of the service provision throughout the concession period. The structure of the lease rental payment for PFI projects will guarantee a total return to the concessionaire's capital investment expenditures including financing cost repayment and profit to investment. The asset and facilities will be transferred to the public sector at the expiry of the concession period.* (Ninth Malaysia Plan 2006)

The government has claimed that PPP has been successful. This claim is based on three factors. Firstly, statistics show that between 1983 and May 2010, 511 projects had been implemented, and with these projects the government was able to transfer to the private sector and eliminate 113,440 jobs from its payroll, saved RM164.23 billion in capital expenditure, and earned RM6.50 billion from the sale of government equity and assets (3PU 2010).

Secondly, the implementation of PPP has been instrumental in accelerating economic growth through greater investment that subsequently led to corporate expansion. Economic growth was also generated through efficiency gains as more output was produced using a reduced amount of resources. PPP has resulted in the generation of a multiplier effect in the economy (*Seventh Malaysia Plan* 1996).

Thirdly, the savings, proceeds from the sale of equity, assets and incomes generated from corporate tax and from lease rentals enable the government to reduce borrowing, resulting in a more balanced budget and thereby strengthening public sector finances and enabling the reallocation of resources to needy sectors of the economy, especially education and health (*Seventh Malaysia Plan* 1996).

THE NATIONAL POLICY CONTEXT ON THE INTRODUCTION OF PPP

Malaysia began employing the PPP route for public procurement in 1983 through privatisation with the introduction of two key national development policies, the Malaysia Incorporated Policy and the Privatisation Policy. In 1985, the Privatisation Policy was revised through the publication of the *Guidelines on Privatization* (Government of Malaysia 1985). Up to 1985, the government was responsible for the provision of almost all Malaysia's infrastructure services.

The Malaysia Incorporated Policy stressed the need to define, develop and put into operation a new model of economic management whereby the public sector forms partnerships with the private sector with the strategic intention of improving Malaysia's competitive advantage. Under the policy, the public sector acts as a facilitator and pacesetter, as well as the implementer of socio-economic development programmes, working in close cooperation with the private sector. Public–private consultative panels were established and efforts at deregulation to improve public administration were introduced (Rahman 1993). Malaysia's objectives of privatisation included:

- relieving the financial and administrative burden of the government
- improving efficiency and productivity
- facilitating economic growth
- reducing the size and presence of the public sector in the economy, and
- helping to meet the national economic policy targets.

Since the *Sixth Malaysia Plan* (1991–5) the focus of the Malaysia Plans has been on achieving Malaysia's Vision 2020, a long-term socio-economic development plan that aims to transform Malaysia from a developing country into a fully developed and industrialised country by 2020. It is against the backdrop of Vision 2020 that privatisation was accelerated and the privatisation policies of the 1980s were given a boost through the publication of the *Privatization Master Plan for Malaysia* in 1991.

29. 3PU or Public Private Partnership Unit is now known as UKAS or Unit Kerjasama Awan Swasta.

In 2006 and under the *Ninth Malaysia Plan* (2006–10), new strategies aimed at streamlining privatisation were introduced. The strategies included efforts to strengthen the approval procedures, emphasising performance standards, streamlining the implementation process, enhancing viability through risk distribution, strengthening the institutional and regulatory framework, and increasing Bumiputera (indigenous) participation. In addition, the *Ninth Malaysia Plan* also saw Malaysia implementing the Private Finance Initiative.

Under the *Tenth Malaysia Plan* (2011–15) the PFI policy, first introduced under the *Ninth Malaysia Plan*, has been given a 'make-over'. Learning from past mistakes in implementing privatisation and PFI, the so-called 'new wave PFI' under the *Tenth Malaysia Plan* contains a relatively clear, robust, detailed and transparent framework for the concept and method of procurement.

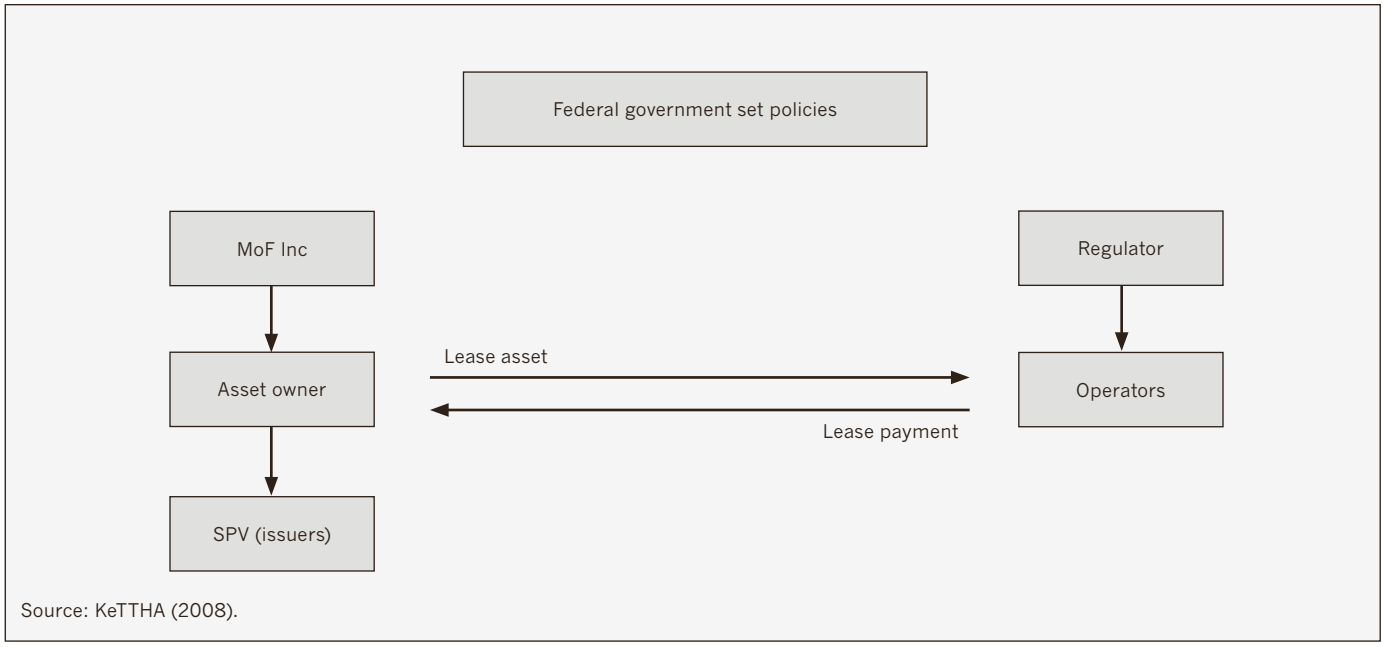
Table 9.1 provides a time line showing the key policies related to the introduction and implementation of PPP (Privatisation and PFI) in Malaysia. Figure 9.1 illustrates the government's position in setting the policy direction for PPP projects.

Table 9.1: Key policies related to the evolution of PPP in Malaysia

Market-led economy		**State-led economy**			**Liberalisation**	**Towards a developed nation – Vision 2020**				
Independence 1957–65	1st MP 1966–70	2nd MP 1971–75	3rd MP 1976–80	4th MP 1981–85	5th MP 1986–90	6th MP 1991–95	7th MP 1996–00	8th MP 2000–05	9th MP 2006–10	10th MP 2011–15
Malaysia's PPP				**Privatisation** Malaysia Incorporated Policy (1983) Privatization Policy (1983) Guidelines on Privatization (1985) Privatization Masterplan (1991)					**PFI** PFI (2006); Treasury Guidelines (2006); Guidelines on PPP (2009) New Wave PPP (2010)	
Implementing agency: Prime Minister's Department				EPU (1983–2009)						3PU from 2009

Source: Treasury Guidelines (2006).

Figure 9.1: Model of government–owner–SPV–regulator–operator relationships



Source: KeTTHA (2008).

THE GOVERNMENT'S ATTITUDE TOWARDS PPP PROMOTION

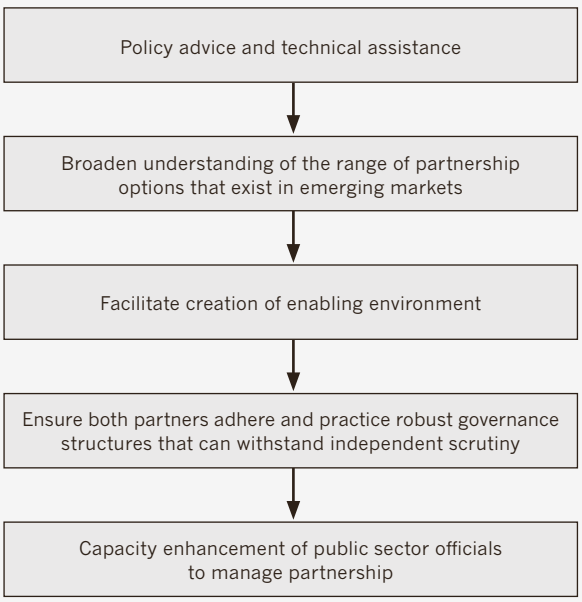
The formulation of various policies and guidelines related to PPP demonstrates the seriousness of the Malaysian government towards PPP. The government has been consistent in implementing PPP. This implementation has been a top-down approach, centrally planned, controlled and coordinated by the Prime Minister's Department. Initially, privatisation was entrusted to the Economic Planning Unit (EPU) but in 2009 a special unit otherwise known as the Public Private Partnership Unit (3PU, now known as UKAS) was established to take over the roles and functions of EPU in implementing PPP.

The current government's commitment to PPP promotion may also be illustrated by the former prime minister's speech during the launch of the *Ninth Malaysia Plan*.

> *Smart and effective partnerships between the public and private sectors will be established to drive the economic transformation agenda. This new wave PPP will ensure equitable sharing of risks and return.* (Ahmad Badawi 2006)

There has been a continuous upward trend in the allocations for PPP projects: under the *Ninth Malaysia Plan*, RM20 billion was allocated for PFI projects and RM5 billion for facilitating grants, while the *Tenth Malaysia Plan* allocated RM63 billion-worth of projects and RM20 billion for a facilitation fund for PPP projects. The facilitation fund is a grant provided by the government to 'bridge the viability gap of projects'. The fund is aimed at facilitating new private sector investment, large-scale ventures and selected privatisation and PFI projects. Figure 9.2 lists the roles of government in promoting PPP.

Figure 9.2: The role of government in promoting PPP



Source: Khairuddin (2010).

CRITIQUES OF PPP

The implementation of PPP is not without its critics. Some of the more common criticisms are given here.

Naidu (1995: 218) observes that during the first decade of privatisation there was 'no tenable system to protect users' welfare and no mechanism through which consumers' needs and preferences can be discovered'. It was as if the users had 'no voice'.

Privatisation between 1991 and 1995 was affected by constraints arising mainly from land and legal issues (Seventh Malaysia Plan 1996). While privatization and PFI under the *Ninth Malaysia Plan* lacked a robust and transparent framework for project financing, procurement, project identification, initiation and implementation, due diligence, progress monitoring and performance auditing (Takim et al. 2008, Khairuddin 2009, Shahriman 2010) suggesting that they were 'rushed-through' and detailed planning was lacking. In addition, (Khairuddin 2009) pointed out the state of readiness of the key players to implement PPP has been under question because of the presence of a relatively big gap between the key areas of competencies required in the provision of PFI services and the availability of Malaysian experts in possession of those competencies.

In the case of the privatised highways, commentators, including Navaratnam (2001) and Khairuddin (2009), report the growing opposition from the public, especially to the continuous increases in toll charges for using the highways. Many parties have requested the government to review past concession agreements, as they see the terms as favouring the concessionaires by allowing them to increase toll charges, notwithstanding the profits these concessionaires have been making over the years. Then, when the government decided not to allow the concessionaires to increase the toll charges, the government ended up paying compensation to the concessionaires. Others have requested the government to abolish or reduce toll charges and some even called for the government to nationalise all privatised highways.

Concessionaires have been enjoying profits but have not suffered losses as these have been absorbed by the government. The reasons for this included 'cronyism', unfair monopolistic advantages, lack of transparency in competitive bidding and lopsided fixed contracts that have sometimes allowed concessionaires to pass on excessive rates and tariffs to the government (Navaratnam 2001, Netto 2006, Ahmad Badawi 2006, Syuhaida and Yusof 2007, Khairuddin 2009).

In the case of the PFI implemented under the *Ninth Malaysia Plan*, criticisms include that the PFIs being implemented were not PFI in the true technical sense of what a PFI should be. Instead the term is being used as a front for a clever technique adopted by the government to alleviate deficits in the annual budgets and to lower borrowing and taxation levels in the short to the medium terms (Khairuddin 2009).

The government approach is to establish government-owned special purpose vehicles (SPVs) and use money from the Employees Provident Fund (EPF) and the Pensions Trust Fund (PTF) to provide the SPVs with funding PFI projects.[30] Some critics argued that these approaches, ie using money from the EPF and the PTF, is akin to taking money from the public coffers; and since the SPVs are government-owned companies, it is the government that is ultimately taking all the risks related to the PFI project financing (Khairuddin 2009). In a survey on the public's acceptance of the government's approach in using the EPF fund to finance PFI projects, 97% of the public responding to the survey indicated strong disagreement with such an approach (Takim et al. 2008).

THE RELATIONSHIP BETWEEN PRIVATISATION POLICY AND PPP

In Malaysia, privatisation precedes PFI. Table 9.2 lists the areas of privatised projects that were implemented between 1983 and 2003. The highest proportion of privatised projects is in the construction sector. Almost all the privatised road projects were implemented through the BOT method (Khairuddin 2009).

Table 9.2: Distribution of privatised projects 1983–2003

Economic sector	Share of privatised projects %
Transport, storage and communications	13.2
Electricity, gas and water	8.4
Construction	15.2
Manufacturing	14.0
Mining and quarrying	4.0
Agriculture and forestry	6.4
Government services	7.4
Finance, real estate and business services	11.0
Wholesale and retail trade, hotel and restaurants	11.2
Others	9.2

Source: Khairuddin (2009: 49).

Privatisation and PFI or PPP are considered alternatives to the conventional approach of public-sector funded services, infrastructures and facilities. The government views them as modern economic tools that would help Malaysia develop and sustain her economy. The implementation of PFI is seen as a collection of measures aimed at improving the delivery of privatised services. Thus, PFI is not only seen as an extension of the privatisation policy but also as an attempt by the government to address criticisms and to remove or alleviate constraints found in privatisation, including streamlining the implementation process, improving transparency and incorporating maintenance of facilities into concession agreements for privatised projects. Table 9.3 shows the main differences between privatisation and PPP.

Table 9.3: Comparison of privatisation and PPP

Privatisation	PPP
Funding via private resources without implicit or explicit public sector guarantee	Funding via private resources without public sector's explicit guarantee
No impact on the level of public sector expenditure	Impact on public budget spread over the duration of the concession
Risks are entirely borne by the private sector	Risks are allocated to parties which can manage them most efficiently
Government acts as regulator	Public sector's involvement is through enforcement of pre-agreed key performance indicators (KPIs)
Long duration of relationship with private contractors	Long duration of relationship with private contractors
Applicable for projects with high commercial viability where public sector is not the main purchaser of the output	Applicable for projects that are commercially viable where public sector is the main purchaser of the output

Source: 3PU (2009).

FOREIGN INFLUENCES ON THE NATIONAL DEBATE

Malaysia's move from state-led economy to privatisation in 1983, and later on to PFI/PPP, did not happen in a vacuum. The policy shift is consistent with the global trend in economic management and reforms of the 1980s when Margaret Thatcher became prime minister of the UK in 1979, and Ronald Reagan the president of the US in 1980. During this era, there was a swing to conservative and right-wing economic thinking (eg monetarism and supply-side economics) and the promotion of privatisation by international agencies such as the World Bank and the Asian Development Bank (Jomo 1995: 1).

30. The government, under the minister of finance Inc., formed two SPVs and provided them with project finance from the government-owned EPF and PTF. The two SPVs were Pembinaan BLT Sdn Bhd (for projects under the Ministry of Home Affairs, which commenced operation in 2005) and Syarikat Pembinaan PFI Sdn Bhd (for projects implemented under the *Ninth Malaysia Plan*) (Khairuddin 2009).

The Malaysian public sector policy in the provision of infrastructure shifted from state-led to privatisation and PFI, later re-branding the latter as PPP, following similar lines to practices elsewhere, especially in the UK. Nonetheless, Khairuddin (2009: 111) points out that in the context of the PFI under the *Ninth Malaysia Plan*, the Malaysian PFI is not necessarily the same as PFIs implemented elsewhere.

In contrast to the UK PFI model, the respective SPV, being a government owned company, does not genuinely assume risks. Instead all risks associated with the investment, construction, maintenance and operation of the buildings and infrastructures under the PFI projects remain with the government. It seems, therefore, that the PFI are not PFI in the true sense. Instead they are namesakes. Consequently, the PFI are PFIs the Malaysian way.

A review of the literature on privatisation and PPP published by the EPU, 3PU and other agencies such as the Malaysian Highway Authority gives no indication that the government is using foreign consultants directly in the implementation of privatisation and PPP. Even so, it could not be denied that some forms of technology and consultancy might have been imported. Privatisation has enabled Malaysians to acquire new technologies and expertise from foreign equity holders, management contract or consultancy services (*Seventh Malaysia Plan*). Some of the staff involved with privatisation and PPP received training abroad, for instance in the UK and Australia.

HISTORY OF PPP EVOLUTION

With the launch of the privatisation policy in 1983, the government set up the Privatisation Special Task Force in the Economic Planning Unit (EPU) of the Prime Minister's Department to coordinate the implementation of the policy. With the publication of the *Privatization Master Plan* in 1991, the special task force was renamed the Privatization Section of the EPU. In 2009, the Privatization Section was transferred into a new dedicated agency to plan and implement PPP. This agency was known as the Public Private Partnership of the Prime Minister's Department or UKAS (Unit Kerjasama Awam Swasta, formerly known as 3PU).

The implementation of privatisation and PPP required amendments to the Federal Constitution, the Employment Act 1995 (Revised 1981) and the Pensions Act 1980. New legislation was enacted and regulatory bodies were established to allow privatisation and PPP to take place, and to provide the requisite implementation and regulatory frameworks.

To allow privatisation to take place, the government passed the following:

- The Federal Roads Act (Revised 1989)
- Tolls (Road and Bridges) Act 1965 (Revised 1989)
- Port Authorities Act 1963 (Revised 1992).

To facilitate implementing privatisation, the government passed the following:

- Abattoirs (Privatization) Act 1993
- Sewerage Services Act 1993
- Highway Authority Malaysia (Incorporation) Act 1980
- Ports (Privatization) Act 1990
- Water Services Industry Act 2006
- National Water Services Commission Act 2006
- Street, Drainage and Building Act 1974
- Town and Country Planning Act 1976
- Local Government Act 1976
- Control of Padi and Rice Act 1994.

The following guidelines and key publications on PPP were released:

- Malaysian Incorporated Policy 1983
- Privatization Policy 1983
- Guidelines on Privatization 1985
- Privatization Master-plan 1991
- Private Finance Initiative under the *Ninth Malaysia Plan* 2006
- Procurement Guidelines for the Implementation of Projects under the Private Finance Initiative (PFI), Treasury letter, 14 September 2006
- Guidelines on Public Private Partnership 2009
- Private Finance Initiative under the *Tenth Malaysia Plan*.

INSTITUTIONS AND CAPABILITY OF THE PPP MARKET

Table 9.2 shows the areas of privatised projects that were implemented between 1983 and 2003. The highest proportion of privatised projects is in the construction sector, within which construction of road and highway projects top the list. Table 9.4 provides a list of privatized roads and highways, completed and in operation and those currently under construction (at the time of writing).

Table 9.4: Privatised highways: completed and under construction

Highway	Length (km)	Concessionaire	Opened	Concession period
Penang Bridge	13.5	Penang Bridge Sdn Bhd	9/1987	24 yrs 8 months to 5/2018
North South Highway	823.0	Projek Lebuhraya Utara Selatan Bhd	5/1988	48 yrs to 5/2038
Shah Alam Highway (KESAS)	34.5	Konsortium Expressway Shah Alam Selangor Sdn Bhd	9/1998	28 yrs 9 months to 8/2022
Seremban – Port Dickson	22.7	Plus Expressway Bhd	12/1998	n/a
Second Link Malaysia – Singapore	44.7	Linkedua (M) Sdn Bhd	8/1998	n/a
Kuala Lumpur – Karak Highway	60.0	MTD Prime Sdn Bhd	4/1999	27 yrs to 5/2021
Butterworth – Kulim Highway	17.0	KLBK Sdn Bhd	11/1996	30 yrs
Cheras – Kajang Highway	11.7	Grand Saga Sdn Bhd	1/1999	n/a
Kajang SILK Highway	37.0	Sistem Lingkaran-Lebuhraya Kajang Sdn Bhd	6/2004	n/a
Damansara-Puchong Highway	40.0	Lingkaran Transkota Holdings Bhd	1/1999	n/a
Selat Kelang Utara Baru Highway	17.5	Shapadu Sdn Bhd	3/2002	n/a
Ampang Elevated Highway	7.9	Projek Lintasan Kota Sdn Bhd	12/2000	n/a
Sungai Besi Highway	16.7	Besraya (M) Sdn Bhd	1/1999	n/a
Butterworth Outer Ring-road	12.1	Lingkaran Luar Butterworth (Penang) Sdn Bhd	2/2007	30 yrs
Skim Penyuraian Trafik KL-Barat	26.0	Sistem Penyuraian Trafik KLBarat Sdn Bhd (SPRINT)	6/2001	n/a
New Pantai Highway	19.6	New Pantai Expressway Sdn Bhd	4/2004	n/a
Guthrie Corridor Highway	25.0	PROLINTAS Expressway Sdn Bhd	4/2005	n/a
East Coast Highway (Phase 1)	169.0	MTD Prime Sdn Bhd	8/2004	n/a
East West Link Expressway	17.0	Metramac Corporation Sdn Bhd	8/2003	n/a
SMART Tunnel	3.0	Syarikat Mengurus Air Banjir and Terowong Sdn Bhd	4/2007	n/a
KL-Putrajaya Highway	26.0	Maju Expressway Sdn Bhd	12/2007	33 yrs
Senai – Desaru Highway	77.0	Senai-Desaru Expressway Bhd	10/2009	n/a
Kajang – Seremban Expressway	44.3	Lebuhraya Kajang – Seremban Sdn Bhd	10/2009	33 yrs
Duta – Ulu Kelang Highway	18.0	Konsortium Lebuhraya Utara-Timur Kuala Lumpur Sdn Bhd	1/2009	n/a
South Klang Valley Expressway	51.0	SKVE Holding Sdn Bhd	6/2010	n/a
Kamuning – Shah Alam Highway	14.7	Projek Lintasan Shah Alam Sdn Bhd	8/2006	n/a
Kuala Lumpur – Kuala Selangor Highway	31.0	Kuala Lumpur – Kuala Selangor Expressway Bhd	8/2006	
Under construction			**Construction started**	
East Coast Highway Phase 2	79.0	MTD Capital Bhd	9/2006 (82.08% completed)	
East Johor Bahru Highway	8.10	MRCB Lingkaran Selatan Sdn Bhd	2/2008 (47.19% completed)	
North Kinrara –Shah Alam – Old Klang Road	0.5	RY Engineering Consultants Sdn Bhd	7/2009 (85% completed)	
Total	1,767.5	1,679 km in operation, 87.6 km under construction		

Source: Malaysian Highway Authority (2010).

The Ministry of Home Affairs undertook a one-off PFI in 2005 through which the government-owned SPV Pembinaan BLT Sdn Bhd completed RM2 billion-worth of building projects. The projects are mainly stations, living quarters and associated works for the Malaysian police.

When the *Ninth Malaysia Plan* was implemented, another government-owned SPV, Syarikat Pembinaan PFI Sdn Bhd, was entrusted with implementation of 425 projects belonging to various government ministries and agencies, and worth RM20 billion. Under the *Tenth Malaysia Plan* (2011), 52 high-impact projects worth RM63 billion have been identified for implementation under PPP.

Major clients of PPP projects

The Federal government followed by the state governments are the major clients of PPP projects. For example, between 1991 and 1995, 204 projects were privatised, of which 56.4% were Federal government and 43.6% state government projects (*Seventh Malaysia Plan*). According to Takim et al. (2008), under the *Ninth Malaysia Plan*, from a total of 880 projects to be procured by the government, 425 projects (48%) were to be procured via PFI with the Ministry of Education as the largest beneficiary (325 projects or 76%).

Malaysian contractors with experience in PPP projects overseas

Table 9.5 provides the statistics on the Malaysian contractors operating in the global market. Statistics by the Professional Services Development Corporation (PSDC 2011) showing professional construction inputs reveal that from a total of 364 firms registered with the PSDC, 227 or 62% indicated that they are ready to work overseas, 110 or 30% are already working in 60 countries and are involved in providing professional construction inputs in 416 projects.

Nonetheless, the statistics do not provide information on the types of project in which these contractors and professionals were involved, ie whether conventional or PPP, but media reports suggest that several of the larger firms have been involved in build–operate-transfer infrastructure projects overseas, including in China, India and Laos.[31]

Table 9.5: Malaysian contractors in the global market 2008 and 2009

	2008		2009	
Region/country	No	Value (RM, m)	No	Value (RM, m)
ASEAN	7	1,473.94	2	887.44
India	1	899.50	–	–
Middle East	23	5,525.65	16	12,459.78
Africa	1	854.00	–	–
Others	17	451.97	3	80.16
Total	49	9,205.06	21	13,427.38

Source: Construction Industry Development Board (2010).

Government programmes to support PPP

The following are specific programmes and budgets allocated by the government to support PPP.

Facilitation – the government pledges to facilitate project implementation through legislation and land-cost support. The private sector should focus on managing risks associated with design, construction, operations and maintenance of the capital asset. Guidelines on privatisation and on PFI were issued in 1985, 2006 and 2009 respectively.

Facilitating Grant (*Dana Pemudah)* – the *Ninth Malaysia Plan* (2006) established a facilitating grant of RM5 billion. The grant was intended to assist SPVs in identifying project proposals and in implementing PFI projects not included in the *Ninth Malaysia Plan*.

Facilitation Fund – the *Tenth Malaysia Plan* (2011) allocated RM20 billion to a facilitation fund. Grants will be given to assist private sector involvement in PPP projects in strategic sectors such as infrastructure, education, tourism and health.

Aggressive promotion of PPP including capacity building (see Figure 9.2).

31. For further information see Skyscrapercity (2011) and IJM (2011).

PPP MODELS

During the earlier period of privatisation (1991–5), most of the projects privatised were through the sale-of-equity method, followed by sale-of-asset method and BOT (*Seventh Malaysia Plan* 1996). Other methods of privatisation included:

- land swap
- build–lease–transfer (BLT), build–operate–lease–transfer (BOLT)
- sale of assets/equity
- listing
- build–operate–transfer (BOT)
- management contract
- management buy-out
- a combination of the above methods.

PPP approval process

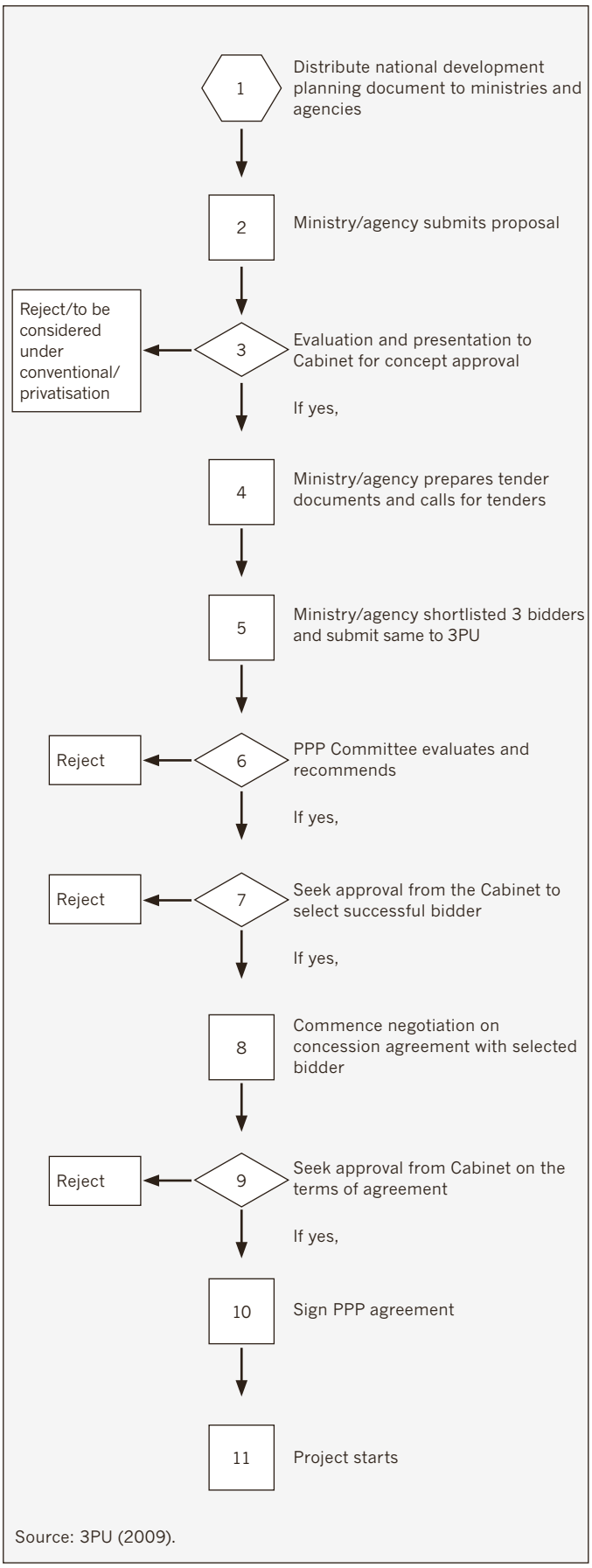
Table 9.6 provides an overview of the *Guideline on Public Private Partnership*, issued by the government in 2009 (3PU). Figure 9.3 is a flowchart of the approval process and Figure 9.4 illustrates the relationships of the key players in a typical PPP project.

Table 9.6: A summary of the *Guideline on Public Private Partnership* (2009)

Section	Brief description
Scope and aims of the guideline	The guideline is intended to be brief and is subject to periodical reviews
Introduction	**Principles of PPP projects:** High socio-economic impact Value for money Shorter delivery period, increase in efficiency of the delivery services High level of responsibility, efficiency and effectiveness **Criteria for PPP projects:** Public private partnership Public sector dictates output specification Private sector decides on the required input with elements of innovation and economy Payment for services based on KPIs Maintenance of the facility Design-build-funding-maintain-operate Asset to be transferred to the public sector at the end of the concession agreement Optimum risk sharing Whole life cycle costing
Development of PPP Project	**Proposal to be submitted to the respective government ministry. Contents of the proposal:** Justification for the proposal Business and financial plan Documents in support of financial capability Payment plan Risk allocation
General selection criteria	Output can be identified and measured Project life of at least 20 years Project with outdated technology or component would not be considered Proposer in strong financial position with at least 10% of the project cost The proposer must form a project-specific SPV
Work flow process	A flow chart is provided

Source: 3PU (2009).

Figure 9.3: Approval process for PPP projects



Source: 3PU (2009).

National PPP governance

As explained above, since April 2009 3PU (now known as UKAS) has been the central agency for planning and processing PPP project proposals. The mission of UKAS is:

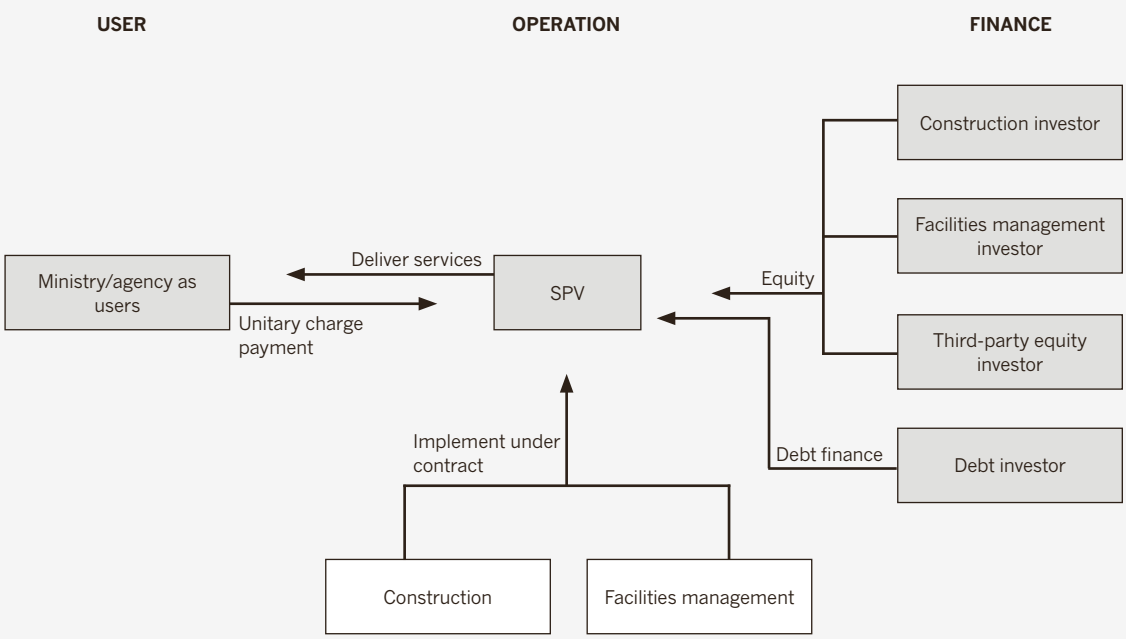
- to strengthen and foster strategic PPPs with transparency and integrity to stimulate the economy for the well-being of the public
- to enhance service delivery through speedy execution and implementation of PPP projects
- to ensure PPP projects are 'value for money' for the government, and
- to be recognised as the centre of excellence for PPP initiatives at national and international levels.

The main functions of UKAS are:

- to act as secretariat to the PPP Committee responsible for evaluating PPP projects and proposing potential projects to the Cabinet for final decision
- to negotiate the terms and conditions of PPP agreements
- to supervise the Facilitation Fund
- to act as secretariat to the government's projects that are to be implemented in the five 'corridors of development' (the East Coast Economic Region, Iskandar Malaysia, Sarawak Corridor for Renewable Energy, Sabah Development Corridor, North Corridor Economic Region)
- to monitor the implementation of PPP projects, Facilitation Fund and corridors of development in Malaysia.

UKAS is structured into ten sections, representing Malaysia's major economic sectors and its main functions. Leadership is provided by a director general assisted by two deputies. UKAS is supported by other central government agencies, namely the Ministry of Finance, Attorney General's Chambers, Department of Land and Mines, Valuation and Property Services Department and the implementing ministries/agencies.

Figure 9.4: Typical PPP user (government)–operation–finance relationships



Source: 3PU (2009).

PUBLIC ACCOUNTABILITY

Value-for-money (VfM) assessment

The government defines VfM in PPP projects (3PU 2009) as occurring where there is:

- optimum risk transfer between the public and private sector
- a long-term contract that includes whole-life-cycle costing
- an output specification that is efficient and effective
- competition leading to fair value projects
- payment based on performance
- private sector management expertise.

According to Suhaiza (2010), the government is yet to come up with a formal and detailed mechanism on the way to determine VfM. Despite this, Khairuddin (2010) points out that some form of VfM assessment, practised in conventional project procurement, is being employed in the evaluation of PPP bids.

PUBLICITY FOR PPP PROJECTS

UKAS maintains a website (www.ukas.gov.my). All matters related to the implementation of PPP including tender advertisements, results of tenders, policies on PPP, etc are posted on their website. In addition, UKAS advertises tenders in the main stream Malaysian media.

PROCUREMENT PROCEDURE

The Guidelines on Public Private Partnership were published by the 3PU in 2009 (now UKAS). A description of the guidelines is in Table 9.6 and see also Figures 9.3 and 9.4. In addition to the projects identified by the government to be procured via PPP, the private sector is also encouraged to submit proposals to the government. Those assessing unsolicited proposals must adhere to the following guidelines (Majid 2010):

- show clarity in the assessment of qualifying criteria
- recognise innovative ideas
- retain the element of competitive tension in the selection process
- practice a high level of transparency and governance
- ensure that risks are well managed and contained.

In a seminar on Malaysia's PPP organised by the International Islamic University Malaysia and 3PU (now UKAS) in 2010, participants expressed concerns over a wide range of issues and uncertainties including the following points.

- How should a PPP project proposal be prepared?
- How should a company respond to a Request for Proposal invited by the government?
- Would expenses incurred in preparing a PPP project proposal be reimbursed by the government?
- How may a company apply for the Facilitation Fund? What are the selection criteria? What are the repayment terms?
- What method is used to evaluate PPP proposals, PSC and VfM?
- Concerns were expressed about the lack of published data and other information relating to PPP projects.

Many key players in the construction industry and other sectors of the construction supply chain are not fully aware of the government's modus operandi for PPP.

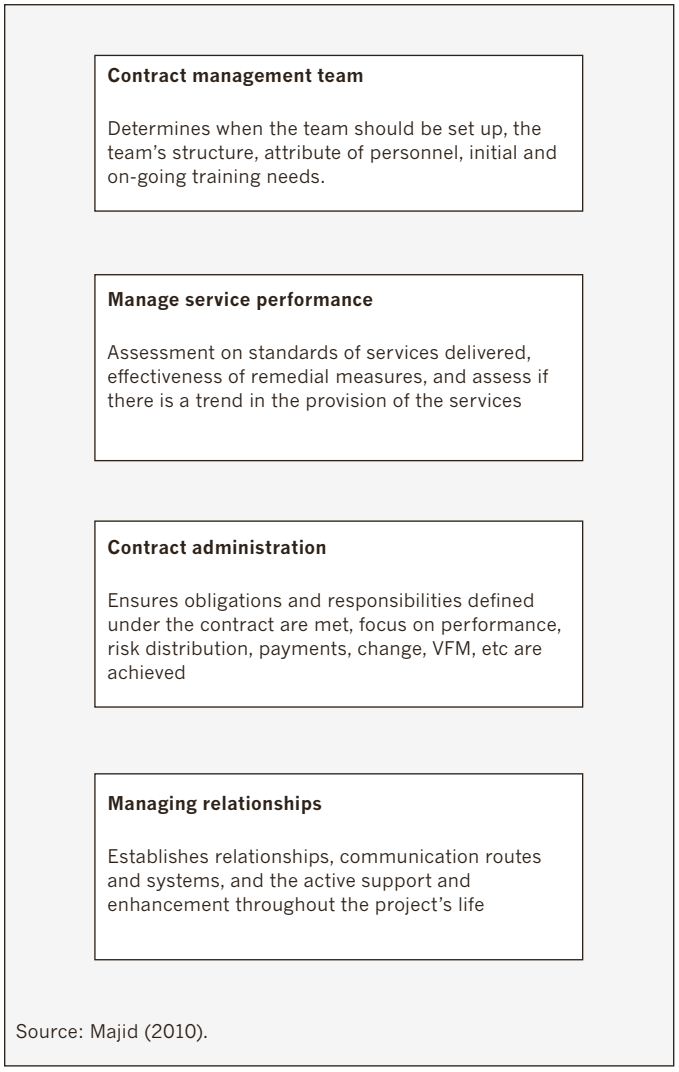
CONTRACT

Notwithstanding the lack of a standard form of PPP contract, Majid (2010) points out the following points should be addressed when structuring PPP contracts:

- flexibility in terms of predicting future requirements and exit costs
- risk identification, allocation and mitigation
- accounting, financial and taxation requirements
- transaction costs
- duration of the concession
- ability to forecast quality and quantity in the long term
- the expected life of assets underpinning the service and their residual value
- continuity of the delivery of the service
- the viability of regularly re-competing for the contract
- the definition of output specifications and linkages to KPIs
- the definition of the payment and penalty mechanism,
- identification of default events and termination.

Majid (2010) further points out that when drawing up a PPP contract, four components of contract management are given emphasis. Figure 9.5 gives an overview of these contract management components.

Figure 9.5: Components of PPP project contract management



Source: Majid (2010).

FINANCIAL PROCUREMENT

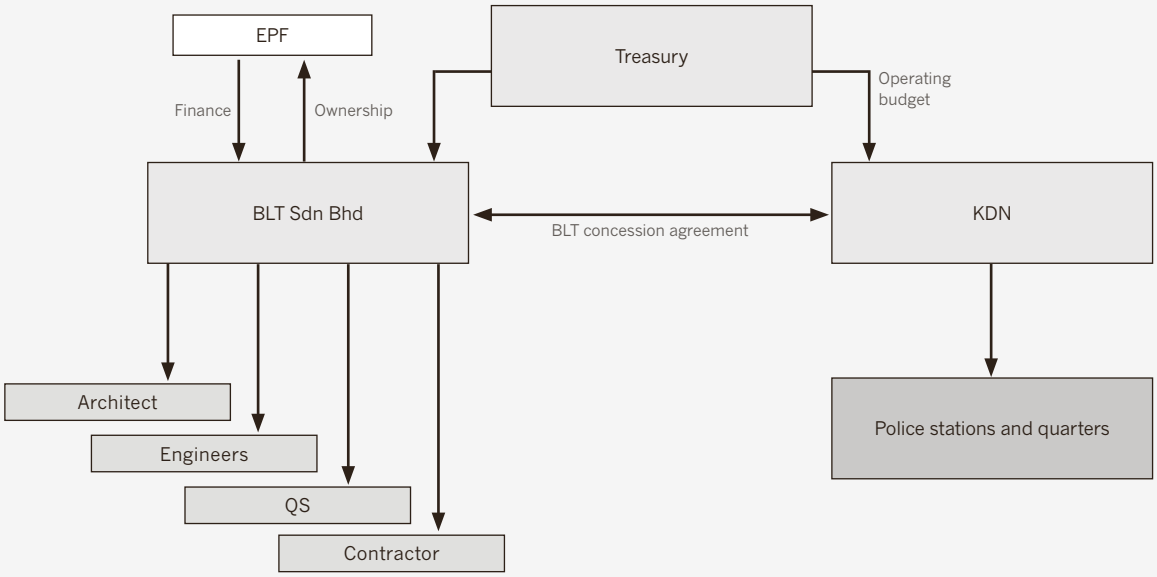
Much of the financial resource for privatisation is tapped from funds in the equity market when privatised entities float their shares on the Kuala Lumpur Stock Exchange (KLSE, now Bursa Malaysia). For example, in 1995 a total of 24 privatised companies were listed on the KLSE with total market value of RM124,695.2 million (1991: 13 companies; RM31,040.2 million). Through the Securities Commission the government made it easier for Infrastructure Project Companies (IPCs) to be eligible for listing on the KLSE, ie these IPCs were not required to meet the usual track-record requirements on condition that they were awarded a concession or licence by the government or state agency and that the remaining concession period was not less than 18 years at the time that the IPCs submitted their proposals for listing. Other requirements included that the project cost was not less than RM500 million and the project must be able to generate income sufficient to give a suitable rate of return to its shareholders. Foreign incorporated companies

operating infrastructure projects outside Malaysia, whose equity and key personnel were controlled by Malaysians, were also eligible for listing on the KLSE (*Seventh Malaysia Plan* 1996).

The listing of privatised companies on the KLSE improved the latter's performance in terms of total market capitalisation and numbers of counters traded, and therefore deepened and broadened the capital market. In addition, the excellent performance in terms of the increased share price of some of the IPCs[32] has benefited many investors and at the same time these shares, owing to their high value, were used as collateral for additional source of funds for further investment (*Seventh Malaysia Plan* 1996). In addition, SPVs appointed by the government also fund their own project, some without government assistance, through a combination of internal funding (equity) and issuing bonds. The bonds often combine Islamic debt (with Shari'ah-compliant terms) and conventional arrangments. Funding is usually organised by one of the Malaysian-incorporated merchant banks (Khairuddin 2009).

Other forms of funding include splitting privatised projects into packages. Those packages that have high potential for the concessionaires to collect users' fees (eg toll roads) are funded internally by the concessionaires, while those packages with lesser potential to generate income are procured by the government via a lump sum contract and paid through interim or deferred payment mechanisms (Khairuddin 2009, cf. case studies below). Funding for the one-off PFI projects for the Ministry of Home Affairs in 2005 was provided by the government-owned EPF and funding for PFI projects under the *Ninth Malaysia Plan* was provided by the EPF, Pension Trust Fund and a government linked bank, Bank Pembangunan Malaysia Berhad. Figures 9.6 and 9.7 illustrate the funding arrangements for these PFI projects (Khairuddin 2009) and Figure 9.8 lists the sources of financing and factors for their consideration for PPP projects under the *Tenth Malaysia Plan* (2010).

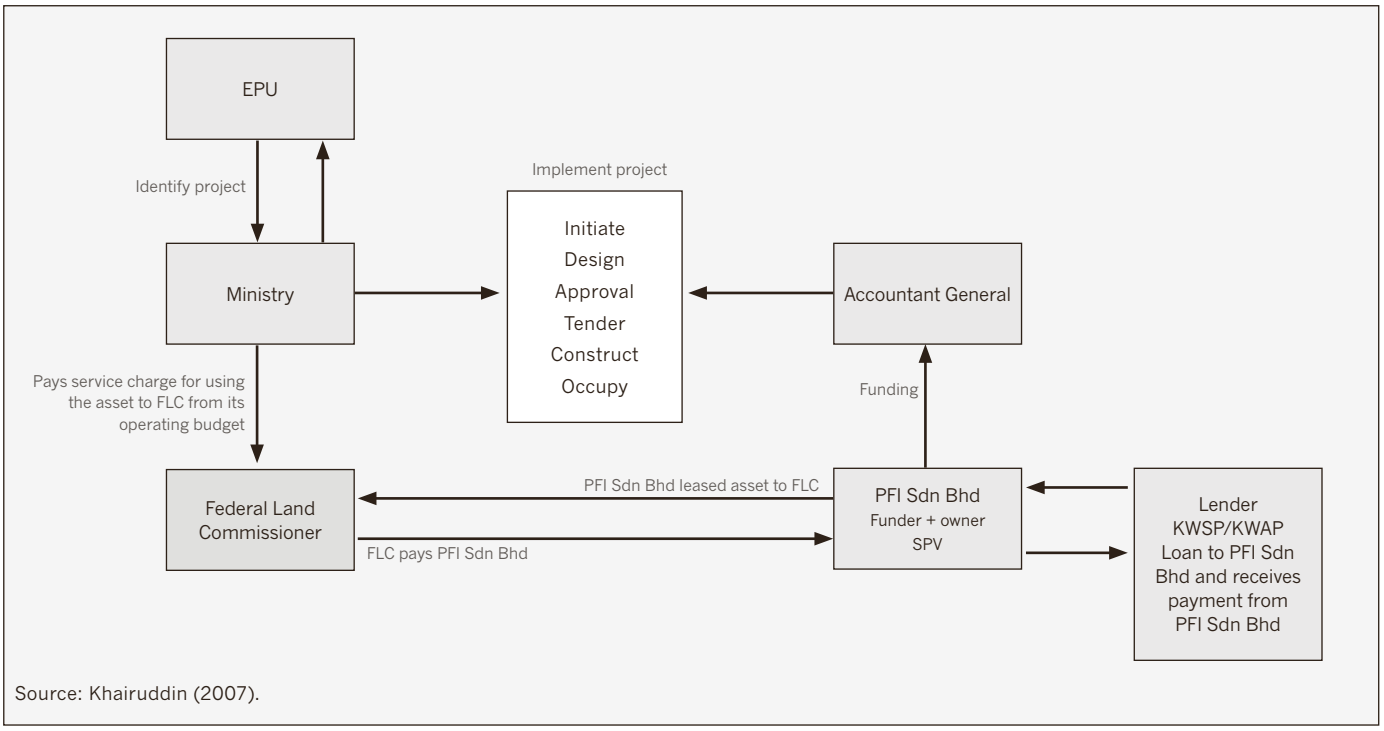
Figure 9.6: Funding arrangement for PFI projects under the BLT Sdn Bhd – Ministry of Home Affairs (2005)



Source: Khairuddin (2007).

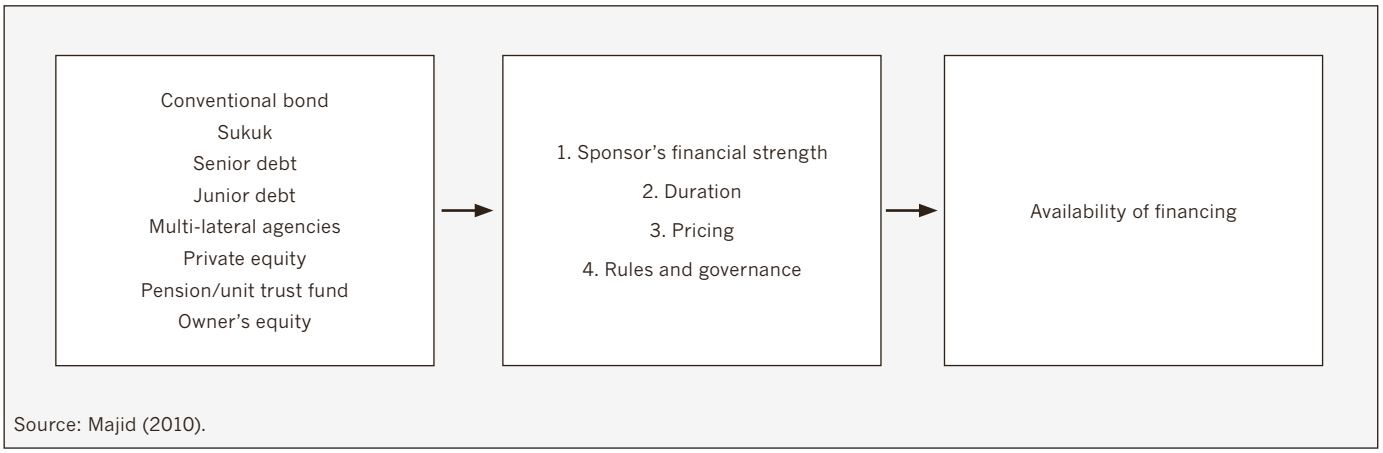
32. For example, TNB a privatised utility company supplying electricity in Malaysia, saw its share price increase by 122% from RM4.50 in 1992 to RM10.00 at the end of 1995.

Figure 9.7: Funding arrangement for PFI projects under the Ninth Malaysia Plan



Source: Khairuddin (2007).

Figure 9.8: Financing for PPP projects



Source: Majid (2010).

CONCLUSIONS

Malaysia's PPP has two main components, namely privatisation and PFI. The former was implemented in 1983 and the latter in 2006. The terms PFI and PPP are often used interchangeably. PPP was implemented against the backdrop of various policies and long-term and medium-term development plans.

Malaysia's PPP has come a long way from what it was 29 years ago. There were shortcomings, especially during the implementation of the earlier privatisation schemes. Even so, many of the shortcomings have been resolved through the later versions of PFI, such as that in the *Ninth Malaysia Plan* (2006). Further strategies are being planned for implementation under the *Tenth Malaysia Plan* (2011) aimed at strengthening the delivery processes of PPP projects. The planning and implementation of the strategies illustrate the government's commitment to learn from past mistakes and to make amends. Consequently, it could be said that that Malaysia's PPP model is approaching maturity.

Malaysia's PPP appears to be a home-grown series of initiatives. While the implementation of PPP is in line with the international trend of market liberalisation, there has been little foreign involvement in the way in which the concept has been formulated, implemented and funded. It has apparently been possible to implement PPP projects using indigenous expertise without encountering major set-backs or difficulties.

Nonetheless, there are issues and problems requiring urgent solutions:

- the absence of a formal and robust scheme for evaluating PPP projects, including the absence of a public sector comparator (PSC)
- the absence of standard forms of contracts for PPP projects
- the lack of participation of private sector banks and other financial institutions in funding PPP projects and the perception that the government prefers the government-owned pension funds or government-linked financial institutions
- the lack of capacity building to equip civil servants and professionals in PPP project supervision, especially in life cycle costing and in facilities management.

PPP is set to stay in Malaysia. Despite the criticisms, Malaysia enjoys many benefits arising from the implementation of PPP.

REFERENCES

Abdullah Ahmad Badawi, Tun (2006), 'Malaysia: Full Steam Ahead', speech at the Kuala Lumpur Business Club Dinner, 24 April.

Construction Industry Development Board (CIDB) (2010), 'Malaysian contractors in a global market', <http://www.cidb.gov.my>, accessed 26 September 2010.

EPU (Economic Planning Unit) (2006), *History of Privatization Programme* <http://www.epu.jpm.my> accessed 13 December 2006.

Government of Malaysia (1971), *Second Malaysia Plan, 1971–1975* (Kuala Lumpur: Prime Minister's Department).

—— (1985), *Guidelines on Privatization* (Putrajaya: Economic Planning Unit, Prime Minister's Department).

—— (1991), *Privatization Master Plan for Malaysia* (Putrajaya: Economic Planning Unit, Prime Minister's Department).

—— (1991), *Sixth Malaysia Plan, 1991–1995* (Kuala Lumpur: Economic Planning Unit, Prime Minister's Department).

—— (1996), *Seventh Malaysia Plan, 1996–2000* (Kuala Lumpur: Economic Planning Unit).

—— (2001), *Eighth Malaysia Plan, 2001–2005* (Kuala Lumpur: Economic Planning Unit).

—— (2006), *Ninth Malaysia Plan, 2006–2010* (Kuala Lumpur: Economic Planning Unit).

—— (2011), *Tenth Malaysia Plan, 2011–2015* (Kuala Lumpur: Economic Planning Unit).

IJM Corporation Berhad (1997), 'What others say' (August), <http://www.ijm.com>, accessed 28 August 2010.

IJM Corporation Berhad (2011), [website], <http://www.ijm.com>, accessed 25 November 2011.

Jomo, K.S. (ed.) (1995), *Privatizing Malaysia. Rents, Rhetoric, Realities* (Oxford: Westview Press).

KeTTHA (2008), 'The Water Tablet – Malaysian Water Reforms', *STARBIZWEEK*, 12 December 2009.

Khairuddin, A.R. (2007), 'PFI: Concept, Organizational and Contractual Structures', proceedings of a seminar on PFI: Concept, Implementation and Lessons Learned, organised by IIUM, Kuala Lumpur, 3 December.

—— (2009), *Understanding Private Finance Initiative* (Kuala Lumpur: ScholarMind Publishing).

Khairuddin, Ahmad Zamri (2010), 'PPP Guidelines: A Conceptual Framework', Proceedings, seminar on Malaysia's Public Private Partnership, organised by IIUM in collaboration with 3PU, Petaling Jaya, 5 August.

Majid, N.N. (2010), 'An Overview of PPP and the Malaysian Experience', proceedings, seminar on Malaysia's Public Private Partnership, Petaling Jaya, 5 August, Public Private Partnership Unit, Prime Minister's Department.

Malaysian Highway Authority (2010), <http://www.llmnet.gov.my>, accessed 31 August 2010.

Malaysian Treasury (2006), *Procurement Guidelines for the Implementation of Projects under the Private Finance Initiative (PFI),* Letter Ref. S/K.KEW/PK/PP/1100/000000/10/31 Jld 20 (1), dated 14 September 2006.

Naidu, G. (1995), 'Infrastructure', in Jomo, K.S. (ed.) (1995), *Privatizing Malaysia. Rents, Rhetoric, Realities* (Oxford: Westview Press), 199–218.

Navaratnam, R.V. (2001), *Malaysia's Economic Recovery. Policy Reforms for Economic Sustainability* (Kuala Lumpur: Pelanduk Publications).

Netto, A. (2006), 'Malaysia's Newfangled Privatization Fudge', *Asia Times*, 18 October.

3PU (Public Private Partnership Unit) (2009), *Garispanduan Kerjasama Awam Swasta (Guidelines on Public Private Partnership)* (Prime Minister's Department).

—— (2010), *Proceedings*, seminar on Malaysia's Public Private Partnership, Petaling Jaya, 5 August (Prime Minister's Department).

Rahman, Abdullah Abdul (1993) 'Malaysia Incorporated: Private Sector-public Sector Collaboration', in Hamid, Ahmad Sarji Abdul (ed.), *Malaysia's Vision 2020: Understanding the Concept, Implications and Challenges* (Kuala Lumpur: Pelandul Publications), 369–82.

PSDC (Professional Services Development Corporation) (2011), [website], <http://www.mypsdc.com>.

Shahriman, Johari (2010), 'Need for Clear Private Finance Initiative Framework', *Business Times*, 22 July.

Skyscrapercity (2008), 'YTL Ventures into China' (20 June), <http://www.skyscrapercity.com>, accessed 26 August 2010.

Skyscrapercity (2008), 'Plus submits proposals for India highway jobs' (23 October), <http://www.skyscrapercity.com>, accessed 28 August 2010.

Skyscrapercity (2011), [website], <http://www.skyscrapercity.com>, accessed 25 November 2011.

Suhaiza, Ismail (2010), 'Value for Money – A Comparative Analysis', Proceedings, Seminar on Malaysia's Public Private Partnership, organised by IIUM in collaboration with 3PU, Petaling Jaya, 5 August.

Syuhaida, Ismail and Yusof, Aminah Md (2007), 'Developing the Delivery of Key Performance Indicators in Assessing the Performance of Public Infrastructure Provision via PFI in Malaysia', proceedings of MICRA 2007, 6th Conference and Annual Meeting, UiTM Shah Alam, 28–9 August.

Takim, R., Abdul Rahman, R., Ismail, K. and Egbu, C.O. (2008), 'The Acceptability of PFI Scheme in Malaysia', *Asian Social Science*, 4 (12).

10. The use of the public private partnership concept in Singapore

Asanga Gunawansa, National University of Singapore

INTRODUCTION

The concept of PPP has been adopted by many countries as it provides an opportunity for efficient allocation of project risks whereby these can be borne by the parties who are best able to manage them. Procurement of PPPs has become popular as they enable the provision of value for money to the public by tapping into the expertise of, and benefiting from the technology and management skills of the private sector (Algarni et al. 2007; ADB 2008).

The concept of public private partnership (PPP) was introduced to Singapore in 2003. Although there was much hype about what it could accomplish in Singapore in the early days, so far only eight projects have been successfully procured as PPPs. Notably, four of these projects concern the building of physical infrastructure facilities. Two of the projects are in the area of information technology infrastructure. The remaining two projects deal with the construction of defence facilities. In recent times, several projects initially considered for development as PPPs have been procured following the more traditional methods such as design and build. This chapter examines the key barriers that have contributed to the slow progress made thus far, and the policy and institutional changes necessary to make PPPs a success story in Singapore. The analysis presented and the conclusions reached in this chapter are based on a study of the existing literature and policy architecture.

USE OF THE PPP CONCEPT IN SINGAPORE

As noted in Chapter 1, there is no precise and commonly accepted definition of PPP. The difficulty arises as a result of the diverse interests and objectives of the public and private parties when entering into PPPs. For the public sector, the need to enter into PPPs may be due to lack of finance, the need for modern technology or for effective and efficient management skills, and the need to transfer risk. For private sector entities, PPPs offer new investment opportunities, new markets and the opportunity to collaborate with public sector entities that, in the past, enjoyed a monopoly in the provision of certain infrastructure facilities (Gunawansa 2000).

The needs of both public sector and private sector entities to enter into PPPs can differ from project to project and jurisdiction to jurisdiction. This is another reason for the absence of a common definition of PPP. For example, the need of a cash-strapped developing country to enter into a PPP to develop a project to provide clean water or electricity to the citizens will be different from the need of a developed country in considering a PPP to develop an airport or a highway.

In Singapore, the Ministry of Finance (MOF) produced the following definition.

> *PPP refers to long-term partnering relationships between the public and private sector to deliver services. It is a new approach that Government is adopting to increase private sector involvement in the delivery of public services.* (M0F 2004)

The Singapore definition focuses on PPPs as long-term relationships between the public and private sector which enable the public sector to involve the private sector in providing services to the people. This definition does not give any indication as to the real need for the public sector to enter into PPPs. Further, in Singapore, the PPP is also seen as a way of bringing in specialist private sector expertise to stimulate an exchange of ideas and bring more international players into the domestic market (KPMG 2007).

Even though there is some evidence indicating that private investment in public infrastructure can be traced back to the 18th century in European countries (Kumaraswamy and Morris 2002), according to Harris (2004), the increasing adoption of PPPs by countries in the late 1990s was due to the success of PPPs in the UK. According to Harris, it was the development and refinement of the private finance initiative (PFI) by the UK in 1992, as one of a range of government policies designed to increase private sector involvement in the provision of public services, which led to the renewed international interest in PPPs. Since then, many countries around the world have either embarked on or considered the adoption of a PPP programme (Harris 2004).

PPP was first introduced in Singapore in 2003 under the Best Sourcing Framework, whereby the public sector will engage private sector providers to deliver non-core government services that the private sector can provide more effectively and efficiently (MOF 2004). The first PPP contract was awarded by the Public Utilities Board (PUB) for a desalination plant.

Singapore's interest in PPP was set out in a consultation document and a subsequent *PPP Handbook,* which was published in October 2004 by the MOF. This handbook provides general guidance on PPP procurement, and dictates that all government infrastructure projects in excess of S$50 million should be actively considered for suitability as PPPs. As stated in the *Handbook*, the MOF has identified a number of sectors in Singapore for PPPs. These include sports facilities, incineration plants, water and sewerage treatment works, large IT infrastructure facilities, education and healthcare facilities, expressways and government buildings.

According to the *Handbook*, the main aims of implementing PPPs in Singapore include:

- allowing the public sector to get better value for money in the delivery of public services
- offering the private sector more business opportunities and more room to innovate and offer efficient solutions for public services, and
- combining the expertise of the government and the private sector to meet the needs of the public effectively and efficiently (MOF 2004).

In addition to the *Handbook*, the MOF created a PPP Advisory Council whose aim is to create awareness of PPP, draft PPP policy and provide guidance on PPP matters. The Council also oversees the progress of major PPP projects and facilitates resolution of inter-agency issues.

Nonetheless, since the introduction of the PPP concept in Singapore, it has achieved very limited success, with only eight PPPs successfully implemented to date. The limited success of PPPs in Singapore was not envisioned by either public sector or private sector entities as its introduction was met with much enthusiasm. As commented by Harris (2008):

> *With an apparent championing behind this within the Ministry of Finance, and a strong pipeline of planned projects, the stage seemed set for a promising period for developers, bankers and the usual slew of advisers (financial, legal and technical). Three years later and the common view seems to be that things haven't worked out as planned. That's not to say things have gone badly. More that things have gone slowly and, on a few occasions, with some unexpected hiccups in implementation. Let's face it, in the Singapore context, that's unusual.*

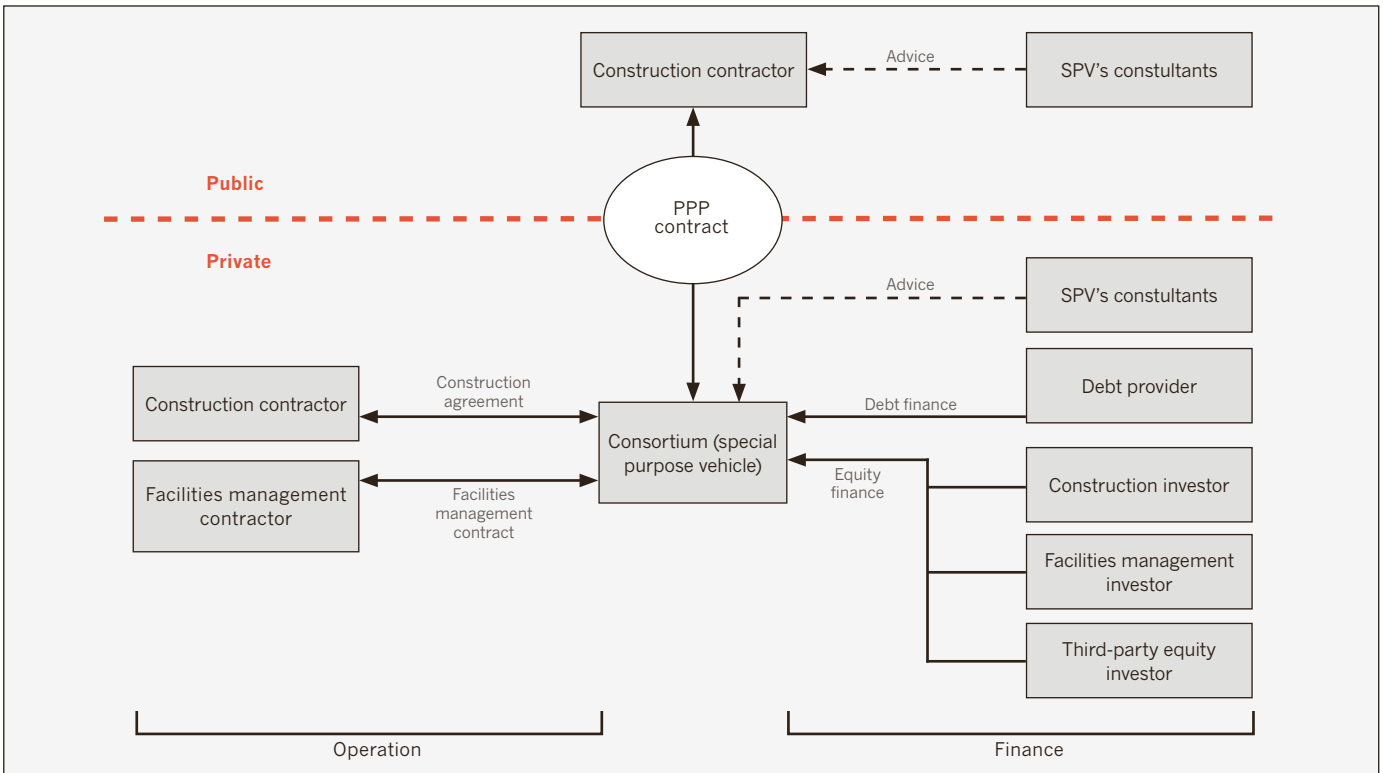
In these circumstances, it is important to consider whether PPP is a feasible procurement method for the development of public infrastructure facilities in Singapore. Further, it is important to examine the reasons for the limited success of PPPs in Singapore and propose measures to give PPP a new lease of life if it is to be a viable procurement option for the country.

PPP STRUCTURE AND PPP PROJECTS IN SINGAPORE

PPPs are implemented for a wide range of social and economic infrastructure projects. They are, however, used mainly to build and operate hospitals, schools, prisons, roads, bridges and tunnels, light rail networks, and water and sanitation plants (IMF 2004). Usually, the project will take the form of one of the PPP models such as joint ventures, strategic partnerships between the public and private sectors, design–build–operate (DBO), design–build–finance–operate (DBFO), build–operate–transfer (BOT), build–transfer–operate (BTO), build–own–operate (BOO) and many other variants (MOF 2004; IMF 2004). As each PPP project is unique, a different PPP model can be flexibly selected and tailored according to the project (Gunawansa 2000). The public sector and the private sector have to work closely together to determine the optimal scope of collaboration in each PPP project for the benefit of the members of the public who use the services, the government and the private sector (MOF 2004).

Under a PPP, a public entity would typically specify the outputs or services required and a private company or consortium would be responsible for the finance, design, construction, operation and maintenance of a facility. The consortium is typically organised by a project developer who brings together financiers, engineering firms, construction companies and facilities management companies to provide individual services. A typical PPP structure is shown in Figure 10.1.

Figure 10.1: PPP structure



Source: MOF (2004).

The PPP contract between the public agency and the consortium would usually be for a period of 10 to 30 years and, unlike traditional procurement methods, the public sector does not own the facility during this period. A PPP thus allows the public sector to move away from directly owning and operating facilities, to purchasing services directly from the private consortium (MOF 2004). Alternatively, the public sector may continue to deliver the core services traditionally associated with a facility (such as teaching in schools and medical services in hospitals) while the consortium may deliver the ancillary services which support the infrastructure). It is often only after the expiry of the contract period that the facility returns to public ownership.

A PPP is different from a conventional project in that a PPP consortium would be able to recover its investment only through income earned by operating the facility. As stated by KPMG (2007), the public sector may compensate the consortium with service payments, rights to levy tariffs or fees against the public users, or a combination of these. For a project that produces a public utility service, an off-take contract may be signed between the consortium and the public agency, whereby the public agency agrees to purchase the output of the facility at an agreed price and volume on a long-term basis. This off-take contract serves as the basis for project financing (Yescombe 2002).

The PPP payment mechanism typically provides the government with the power to withhold or deduct payments if the quality of service provided by the private sector consortium is lower than agreed. The government may also reserve the right to step in and regain control of the asset in the event of repeated default in service provision by the private sector operator.

CURRENT STATUS OF PPPS IN SINGAPORE

According to the Department of Treasury and Finance (2002), by using the joint skills of the public and private sectors, Singapore will be able to:

- create new infrastructure which will potentially be of a standard beyond that which could be delivered by the public sector alone
- support the infrastructure with guaranteed services to ensure its continued usefulness, efficiency and longevity
- take advantage of innovative ideas and technology, which have traditionally been fostered in commercial environments, for the benefit of users of public infrastructure, and
- manage the risks that naturally come with very large and complex infrastructure projects more effectively by allocating risks to the party that is able to manage them best.

Nonetheless, as stated in a report by KPMG (2007):

> *Unlike many countries undertaking PPP, the government of Singapore does not need private funds to improve its social and other infrastructure. It has large reserves and typically a budget surplus. Nor would the government necessarily concede that private sector provision of goods and services is more efficient than that of the public sector. The need or ability to raise capital is a less pressing concern in Singapore than it might be in some parts of the region.*

Thus, the rationale for introducing PPP into Singapore is mainly focused on the need to achieve value for money in the delivery of public services as stated in the *PPP Handbook* (ADB 2008). This means that PPP was perceived as a mechanism that could be used for projects to allow optimal balance of benefits and costs on the basis of total cost of ownership, even though it may not be at the lowest price. This could be achieved when synergies are generated through the alignment of design, construction, maintenance and operation phases, taking into consideration the whole life cycle of the project (MOF 2009).

PPP PROJECTS IMPLEMENTED IN SINGAPORE

Since the introduction of PPP in 2003, the Singapore government has explored the implementation of various projects as PPPs. Some have met with success while others have been abandoned, awarded under traditional procurement methods, or are still under consideration. A summary of these projects and their status are presented in Table 10.1.

Table 10.1: PPP projects in Singapore as of 27 October 2009

No	Project description	Launched	Public agency in charge	Project status
1	Desalination plant: design–build–own–operate (DBOO) facility to supply desalinated water to PUB for 20 years	September 2001	PUB	Tender awarded on 19 Jan 2003. Project completed and in operation since September 2005.
2	Ulu Pandan NEWater Plant: a DBOO project for recycling and supply of waste water to PUB for 20 years	May 2004	PUB	Tender awarded on 15 Dec 2004. Project completed and in operation since March 2007.
3	Fifth incineration plant: a DBOO project to incinerate 800 tonnes of refuse per day for a period of 25 years	May 2005	National Environment Agency (NEA)	Tender awarded on 14 Nov 2005. Project completed and in operation since the beginning of 2010.

No	Project description	Launched	Public agency in charge	Project status
4	TradeXchange: an IT PPP project to develop the software for one-stop integrated logistics information port, including the maintenance and operation of the system for 10 years.	Dec 2005	Singapore Customs	Contract awarded on 8 Dec 2005. Tenure of 10 years between 2007 and 2017
5	Basic Wings Course: a 20-year PPP to acquire and maintain a fleet of trainer aircraft and ground-based training systems to meet the hardware requirements for the Republic of Singapore Air Force's basic wings flying training.	Aug 2005	Ministry of Defence (MINDEF) –RSAF	Tender awarded/ financial close achieved on 3 Nov 2006. Tenure of 20 years from 2008 to 2028.
6	Rotary Winged Course: a 20-year PPP to leverage commercially available platforms and maintenance operations to optimise the resource and risk allocation between public sector and private sector in flying training operations.	Nov 2005	MINDEF –RSAF	Tender awarded in November 2005 for duration of 20 years from 2006 to 2026
7	Next Generation National Broadband Network: a PPP project for the design and construction of the passive infrastructure of the Next Generation National Infocomm Infrastructure, which seeks to transform Singapore into an intelligent nation and global city, powered by infocomm. The project also involves the sale of services to an operating company.	February 2006	Infocomm Development Authority (IDA)	Passive infrastructure tender awarded in October 2008. Active infrastructure: tender awarded in April 2009. Estimated completion date in 2012.
8	ITE College West: design–build–finance–operate (DBFO) project for a period of 27 years. The PPP includes the management and coordination of all building-related and estate management matters, allowing the ITE to focus its resources and attention on the delivery of vocational and technical education.	July 2006	Institute of Technical Education (ITE)	Tender awarded/ financial close achieved on 11 Aug 2008. Construction phase of the project. The Project is under construction (2011).
9	Changi NEWater Plant: a DBOO project for the supply of 50 million gallons of NEWater per day to PUB over a period of 25 years.	Aug 2007	PUB	Tender awarded in early 2008. In first phase of commercial operation since 2009 Officially opened in May 2010
10	Sports Hub: a 25 DBFO concession for a sports hub.	December 2005	Singapore Sports Council (SSC)	At preferred bidder stage since 19 January 2008.
11	NUS University Town: a PPP for the development of a 6,200-bed student housing with ancillary facilities.	June 2007	National University of Singapore (NUS)	Consortiums were shortlisted in June 2007. Decision to launch the project as a PPP was subsequently terminated in September 2007.
12	Advanced Fighter Winged Course: a PPP for providing classroom teaching and aircraft simulators for Advance Fighter Winged Course.	December 2008	Defence, Science & Technology Agency (DSTA)	Bids submitted for project in August 2009. Current status unknown.
13	Rifles Range Training Facility: a 20-year PPP for the construction, maintenance and management of a training ground for small arms.	Unknown	DSTA	Bids submitted for projects in late August 2009. Project cancelled in 2010.
14	2nd Tuas Desalination Plant: a Design, Build, Own and Operate (DBOO) PPP project with a 25 year water purchase agreement.	March 2011	PUB	Tender awarded on 7 March 2011. The water Purchase Agreement signed on 6 April 2011.

Source: Loh 2007, PUB 2007, CNA 2009, Dalal 2009, Lazauskaite 2009, MOF 2009, Wang 2009.

As can be seen from Table 10.1, the Singapore government has considered 14 PPP projects in various asset classes, including water, solid waste, education, defence and IT sector, since the introduction of the concept in 2003. Nine of those projects have been successfully implemented (items 1–9). Five of the latter (desalination plant, NEWater plants, incineration plant, and ITE College West) involve building infrastructure. The projects involving the water and solid waste sector are utility-related PPPs. These have been procured by two agencies, the National Environment Agency and the Public Utilities Board. These projects consist of a single demand stream model with little political sensitivity (KMPG 2007), thus their procurement should not be considered complicated.

Singapore has also sought to procure large-scale social infrastructure projects such as the ITE College West, Sports Hub and the University Town @ Warren. Such projects involve multiple revenue streams and numerous stakeholders with greater scrutiny of business plans (KMPG 2007), thus making them more complicated. The implementation of these projects, with the exception of the ITE College West project, has not been successful. It should be noted that even in the case of the ITE College West, the procurement process had encountered financing delays as the banks that had initially supported the private sector consortium withdrew as a result of the subprime crisis (Lee and Rathbone 2008, Menon 2008).

The University Town project was initially earmarked to be financed, designed, constructed and operated by a private sector entity for a period of 25 to 30 years. In fact, according to a government press release in January 2008 (MCYS 2008), it is now owned and funded by the National University of Singapore (NUS) through government grants. This US$423 million (SGD$500–$600 million) project is expected to be completed before the end of 2010. No clear reason has been disclosed for the shift. It is likely, however, that as it is a social infrastructure development project, the project proponents found it unviable for development as a PPP, given that administration of the university facilities requires active participation of the public sector, while the revenue for the private sector developer has to be sourced from student fees and other sources of revenue to be generated by the facilities within the University Town. Because the town is an educational institution controlled by the public sector, the private developer's freedom to price the services would have had to be highly regulated, a condition that the private sector developer may have found unfavourable.

As far as the Sports Hub project, launched in 2005, is concerned, to date it has not advanced from the preferred bidder stage. The completion date for the project has been repeatedly extended. The first delay occurred because of the addition of a public water sports centre into the original bid requirements, as a result of which the process of submission of the bid proposal and the evaluation period were postponed by about a year (Lim 2007). The second delay occurred as a result of increased construction costs and the contemporary global financial crisis, which made it difficult to raise funds from financial institutions. It is expected that the project will be completed by the end of 2013 or early 2014, provided that there are no further delays (Wang 2009).

BARRIERS TO PPPS IN SINGAPORE

Even though there has been considerable interest in the use of PPP as a procurement method, there are a wide range of barriers. As found by Zhang (2005) in a questionnaire survey of various organisations in different countries such as the United Kingdom, Australia, and China, the barriers to PPPs can be broadly classified into six categories:

1. social, political, and legal risks
2. unfavourable economic and commercial conditions
3. inefficient public procurement framework
4. lack of mature financial engineering techniques
5. problems related to the public sector
6. problems related to the private sector.

It is important to note that the above barriers are not generic to every country. In the case of Singapore, it is not difficult to argue that the social, political and legal risks that usually discourage investors from investing in countries are absent (IMF 2004). Since independence in 1965, Singapore has steadily developed its social, political and legal infrastructure to offer one of the most politically stable, corruption-free and investment-friendly environments in the world (Lim and Lloyd 1986, Peebles and Wilson 2002). Furthermore, Singapore is ranked as the fourth richest country in the world behind Qatar, Luxembourg and Norway (Global Finance 2010, IMF 2010). Moreover, according to the World Economic Forum's Global Competitiveness Report for 2009/10 (WEF 2010), Singapore is ranked the third most competitive economy in the world. It provides *inter alia* that:

> *Its institutions are viewed as the best in the world, while business confidence in the government remains strong despite the global recession. That, along with a highly skilled workforce and sophisticated financial markets, helped Singapore jump two places in the 2009 rankings from last year's result.* (WEF 2010)

In these circumstances, it is difficult to argue that categories 1, 2 and 4 listed by Zhang (2005, see above) apply in the case of Singapore as barriers to PPPs.

As far as the public procurement framework is concerned, it should be stated that Singapore has a well-developed legal system that provides a sound framework for efficient and corruption-free public procurement. For example, the Singapore government is bound by certain commitments in the various international agreements on public procurement, including the 1994 Agreement on Government Procurement (GPA) under the World Trade

Organisation, the Agreement between New Zealand and Singapore on a Closer Economic Partnership (ANZSCEP), the Agreement between Japan and Singapore for a New Age Economic Partnership (JSEPA), the EFTA–Singapore Free Trade Agreement (ESFTA) and Singapore–Australia Free Trade Agreement (SAFTA), and the United States–Singapore Free Trade Agreement (USSFTA).

In addition, as far as national legislation is concerned, Singapore has enacted the Government Procurement Act No. 14 of 1997 as amended (Chapter 120), which deals with public procurement. There are four relevant subsidiary legislations, namely Government Procurement (Challenge Proceedings) Regulations, Government Procurement Regulations, Government Procurement (Application) Order and Government Procurement Act (commencement) Notification 2002. In addition, there is a Government Instructions Manual on procurement procedures.

All public contracts awarded by the Singapore government are published on the government e-business website. The award notice includes the name of the successful tenderer, the contract sum, and a description of the contract along with the name and address of the awarding government procuring entity. A similar disclosure is made by the Ministry of Finance concerning PPP projects (MOF 2004) According to the self-assessment made by Singapore in response to the ADB/OECD Anti-Corruption Initiative for Asia and the Pacific (ADB/OECD 2006), the government procuring entity will, at the request of unsuccessful renderers, explain the reasons why their bids have not been accepted. Thus, transparency in the process is maintained.

As commented by Mr Kamran Khan, head of the World Bank Office Singapore (East Asia Infrastructure Finance Practice Group), in an interview with the *Business Times Singapore* in November 2009:

> *The public entities in Singapore are one of the most efficient in the world. They are professional and act almost like the private sector, but they protect the interest of the public sector, which is a very unique thing.*

Hence, corruption in public procurement as a barrier to PPPs in Singapore can be ruled out as well.

This leaves us to consider whether there are any problems with the public or private sector that act as barriers to implementing PPPs in Singapore. Typically, problems with the public sector in successfully implementing PPP projects would arise because of unfamiliarity with the PPP mechanism, reluctance to share responsibilities with the private sector, problems relating to regulations, lack of commitment towards investor protection, and hesitancy to share risks (Gunawansa 2000, Zhang 2005). Problems with the private sector in implementing PPPs would arise owing to lack of financial and technological capacity, reluctance to work with the public sector, reluctance to deal directly with the end-users of utilities and other infrastructure services, inability to be competitive in delivering services to the public, and incapacity to work in a consortium (Gunawansa 2000, Zhang 2005).

Given the success story of Singapore's economic development and market competitiveness as well as the efficient and transparent public procurement process which has been summarised above, it would be difficult to argue that there were obvious problems with either the public or the private sector in Singapore that would discourage PPPs. If this is the case, then what are the reasons for the limited success of the concept in Singapore? In answering this question, the following hypotheses are proposed.

First, the public sector entities in Singapore such as the PUB, which is in charge of power and water utilities, the Land Transport Authority, which is in charge of the road network, and the Housing Development Board, which is in charge of public housing, to name a few, have been providing efficient services to the public. They have the regulatory and management capacity to take charge of the facilities. They have the necessary funds for development of infrastructure through direct contracting. Thus, the need for PPPs is limited.

Secondly, the Singapore government is committed to financing and encouraging research and development in various areas, including physical and social infrastructure development in the country. As a result, the relevant technologies for the sustainable development of the nation are financed by the public sector and developed largely in public sector entities such as state universities and research centres set up within universities. For example, the Singapore Economic Development Board (EDB) has announced that it will spend about S$680 million (US$483.3 million) to build a clean technology ecosystem over the period 2010 to 2015 as part of the country's plan to become a global research and development hub. EDB has already allocated S$350 million of the total investment for developing the country's clean energy sector, with a focus on solar energy. The remaining S$330 million will go towards developing water and waste management solutions. This initiative is part of the government's plan, announced in September 2009, to invest S$1 billion to build a greener and more energy efficient country by 2015 (EcoSeed 2010). In addition, the Inter-Ministerial Committee for Sustainable Development in Singapore has earmarked about S$700 million for developing the rest of the clean technology sector and S$3.4 billion to boost the country's economic output, along with the creation of 18,000 green jobs by 2015 (EcoSeed 2010). Thus, public entities in Singapore, which invest in the advancement of technology, might find direct contracting with contractors to build public facilities more appropriate than PPPs.

Thirdly, the absence of a centralised body both inside and outside the MOF to champion the cause of PPP also acts as a barrier. The PPP Advisory Council that was set up at the time PPP was introduced into Singapore has functioned largely as an entity to promote PPP awareness, help draft relevant policy and provide guidance on PPP matters. What is required is either to give it more teeth or

replace it with an agency that could act as the 'one stop shop' between public and private sector entities, to facilitate PPPs.

Fourthly, an inadequate focus on project identification and feasibility studies is an apparent weakness in the PPP procurement machinery in Singapore. A number of projects have been unsuccessfully procured (see Table 10.1).

Fifthly, the failure to maintain an identified list of future projects is also a barrier, limiting the scope for public-private engagement to develop projects. If a centralised public sector entity could work with the other government agencies and identify sectors for PPPs and line up possible future projects, then it would provide a more efficient platform for interested private sector entities to engage with the public sector concerning the development of such projects.

Lastly, however efficient and transparent the current procurement mechanism is, use of open tenders may not always be the best procurement practice for PPP. It limits the scope of private sector participation to projects specifically identified by the government. If sectors are identified and a pipeline of possible projects is maintained, interested private sector entities would be able to submit to the government early proposals for developing the pipelined projects. This would enable the government to decide whether to engage in direct negotiations with the private party that had expressed early interest or to call for competitive tenders.

FUTURE OF PPP IN SINGAPORE

As noted above, Singapore offers one of the most reliable and competitive environments for investment. The country has an efficient and corruption-free public sector. Further, the people in Singapore are able and willing to pay for efficient public services. In addition, the local private sector has the capacity to provide the necessary local partnership to foreign investors or to take the lead in investment projects in the country. In these circumstances, the future of PPP in Singapore need not be bleak if the issues identified above are adequately addressed.

The PPP Advisory Council should be empowered to coordinate with the various government agencies to identify sectors in which PPPs can be introduced. It should also take a more active role in promoting guidelines and a framework for the implementation of PPP projects, as well as promoting PPPs to the different agencies. In addition, the PPP Advisory Council should act as a repository of knowledge for all projects that have been either considered or implemented as PPPs. As an alternative, the government should consider establishing a new agency that could perform the functions discussed above. The establishment of a 'one stop shop' that can facilitate the engagement of public and private sector entities should be considered. Such an agency should, in addition to publicising the pipeline of projects and sectors identified for PPP, possess the capacity to facilitate investor engagement by cutting red tape and enabling the acquisition of relevant approvals and permits, provided that such process remains legal.

As far as identification of suitable sectors for PPP is concerned, Singapore should concentrate on sectors where it is financially strong and technologically savvy, and where efficient public sector entities can collaborate with the private sector. Construction of sustainable cities, an area in which Singapore has shown keen interest and has a good reputation, is an area that has much scope for such a partnership. This is because building environmentally sustainable cities requires not only the financial capacity to build but also the technological know-how in many areas such as roads, water, electricity, telecommunication, public housing, industrial and office complexes, and social infrastructure facilities. Such projects require expertise in design and engineering and the participation of manufacturers of environment-friendly construction materials and equipment. Piecing together a sustainable city by entering into thousands of individual contracts would be impractical and difficult compared with a closely knit project development structure in which a few PPPs can work towards developing the project.

CONCLUSIONS

PPP is a feasible procurement method for Singapore. As has been pointed out in this chapter, Singapore has a very conducive environment for PPP projects. Nonetheless, owing to the barriers that have been identified above, few PPP projects have been implemented in Singapore since the introduction of the concept in 2003. Hence there is room for improvement. If the government addresses the concerns raised above and implements the necessary measures, PPPs can play an important role in the continuing development of Singapore. Alternatively, if the government fails to take adequate measures, there is the risk of flight of capital, experts and expertise away from Singapore to other countries in the region. Countries such as China, India and Vietnam offers larger markets to investors, although they may not yet offer Singapore's efficient and reliable investment environment.

REFERENCES

Algarni, A. M., Arditi, D., and Polat, G. (2007), 'Build-Operate-Transfer in Infrastructure Projects in the United States', *Journal of Construction Engineering and Management*, 133 (10): 728–35.

ADB (Asian Development Bank) (2008), *Public-Private Partnership Handbook* (Manila): 12–15.

ADB/OECD (Asian Development Bank and Organization for Economic Co-operation and Development) (2006), *Anti-Corruption Policies in Asia and the Pacific: Progress in Legal and Institutional Reform in 25 Countries* (Manila: ADB).

ChannelNewsAsia (CNA) (2009), 'Singapore's Largest NEWater Plant Begins Commercial Operations', <http://www.channelnewsasia.com/stories/singaporelocalnews/view/446564/1/.html>, accessed 17 January 2010.

Dalal, M. (2009), 'Sports Hub PPP makes Second Attempt to Cross Finish Line', *International Financing Review Asia*, 28 November to 11 January 2009: 627.

EcoSeed (2010), 'Singapore Ramps Up Clean Energy R&D Investment', <http://www.ecoseed.org/en/general-green-news/green-business-news/green-business-news/7244-Singapore-ramps-up-clean-energy-R-D-investment>, accessed 30 May 2010.

Global Finance (2010), 'The Richest Countries in the World', <http://www.gfmag.com/tools/global-database/economic-data/10049-the-richest-countries-in-the-world.html>, accessed 1 June 2010.

Gunawansa, A. (2000), 'Legal Implications Concerning Project Financing Initiatives in Developing Countries', *Attorney General's Law Review*, July.

Harris, J. (2008), 'Project Finance 2008: Singapore Overview', *Expert Guides*, <http://www.expertguides.com/default.asp?Page=10&GuideID=178&CountryID=21>, accessed 11 May 2010.

Harris, S. (2004), *Public Private Partnerships: Delivering Better Infrastructure Services*, Working Paper (Washington DC: Inter-American Development Bank).

IMF (International Monetary Fund) (2004), 'Public Private Partnerships', <http://www.imf.org/external/np/fad/2004/pifp/eng/031204.htm>, accessed 23 May 2010.

—— (2010), 'World Economic Outlook Database', <http://www.imf.org/external/pubs/ft/weo/2010/01/weodata/index.aspx>, accessed 01 June 2010.

KPMG (2007), 'Building for Prosperity: Exploring the Prospects for Public Private Partnerships in Asia Pacific', <http://www.kpmg.com.sg/publications/Industries_PPPinAsia2007.pdf>, accessed 02 June 2010.

Kumaraswamy, M.M. and Morris, D.A. (2002), 'Build-Operate-Transfer-Type Procurement in Asian Megaprojects', *Journal of Construction Engineering and Management*, 128 (2): 93–102.

Lazauskaite, V. (2009), *Developments of Next Generation Networks (NGN): Country Case Studies (International Telecommunication Union),* <http://www.itu.int/ITU-D/treg/Documentation/ITU-NGN09.pdf>, accessed 29 May 2010.

Lee, K. and Rathbone, M. (2008), 'PPP Goes to Singapore', Project Finance International, 2 April 382.

Lim, C. and Lloyd, P. (1986), *Singapore's Resources and Growth* (Oxford: Oxford University Press).

Lim, M. (2007), 'Bigger Sports Hub to Include Water Sports Centre', *The Times*, 14 June.

Loh, C.K. (2007), 'The Public-Private Way for ITE West Campus', *TODAY*, 27 November.

Menon, M. (2008), 'Singapore Braces for PPP Financing Boom', *International Financing Review Asia*, 23 August to 5 September: 565.

MCYS (Ministry of Community Development, Youth and Sports, Singapore) (2008), 'Singapore's Prime Minister Kicks Off Construction Work For University Town Where Youth Olympic Village Will Be Located' [Press Release], 31 January, <http://app1.mcys.gov.sg/PressRoom/SingaporesPrimeMinisterKicksOffConstruction.aspx>, accessed 20 May 2010

MOF (Ministry of Finance) (2004), *Public Private Partnership Handbook Version 1*, <http://app.mof.gov.sg/ppp.aspx>, accessed 01 June 2010.

—— (2009), 'Government Procurement', <http://app.mof.gov.sg/government_procurement.aspx>, accessed 01 June 2010.

Peebles, G. and Wilson, P. (2002), *Economic Growth and Development in Singapore: Past and Future* (Cheltenham: Edward Elgar).

PUB (Public Utilities Board) (2007), 'PUB Calls Public Tender for Singapore's Fifth NEWater Plant' [Press release], <http://www.pub.gov.sg/mpublications/Pages/PressReleases.aspx?ItemId=58>, accessed 11 May 2010.

The Business Times (2009), '9 Singapore Government Agencies Tapped for Urban Hub: Bigger Role Seen for Singapore in Growth of Developing Countries', 13 November.

Wang, M.M. (2009), 'Sports Hub: Vivian Asks for Patience', *The Sunday Times*, 22 November.

WEF (World Economic Forum) (2010), *Global Competitiveness Report for 2000–10*, <http://www.weforum.org/pdf/GCR09/GCR20092010fullreport.pdf>, accessed 30 May 2010.

Yescombe, E.R. (2002), *Principles of Project Finance* (San Diego: Academic Press), 8–15.

Zhang, X.Q. (2005), 'Paving the Way for Public Private Partnerships in Infrastructure Development', *Journal of Construction Engineering and Management*, 131 (1): 71–80.

11. Current status and perspectives of public private partnership for infrastructure projects in South Korea

Myungsik Do, Hanbat National University, Hyeon Park, Korea Development Institute

INTRODUCTION

During the last 30 years, the Korean economy has grown fast and a great amount of money has been invested in constructing infrastructure facilities. As the infrastructure stock grows larger, maintenance cost for facilities constantly increase. As concerns on environment and welfare increase, however, the total budget for infrastructure facilities has been continuously reduced in Korea. Therefore, since the 1990s the use of the public private partnership (PPP) has been treated as an important issue by the Korean government. PPP is an effective way to resolve the financial constraints faced by the government. The scope of PPP projects is expanding from existing ones in road and transportation facilities to social infrastructure facilities, such as schools, hospitals and residential accommodation. As in advanced countries, private participation in infrastructure provision in South Korea is a concept which involves the public and the private sectors working in cooperation and partnership to provide infrastructure and public services.

This chapter presents information on the infrastructure stock transition, the capability of the PPP market, major types of PPP project, relevant organisations, and contract and financial procurement procedures in South Korea, from past and present references. Finally, this chapter includes some urgent problems and future perspectives for PPP implementation in South Korea.

Infrastructure stocks are essential social capital and facilities for human beings. The role of private investment in infrastructure facilities is expected to continue as government revenue is limited and increased expenditure in other sectors such as welfare is necessary. As a complement to treasury investment, since the 1990s a PPP programme has not only supported the continuous provision of economic infrastructure, such as roads, bridges, airports and railways, but has also extended to the Korean government's investment in social infrastructure such as educational, cultural and welfare facilities.

By combining such responsibilities as design, building, financing and operating in a single contract and transferring part of the risks and responsibilities to the private sector, PPP projects realise value for money with lower project costs and improved service quality compared with conventional public procurement. PPP also encourages the private sector to use its professional skills, creativity and innovation, which can thus be extended to the public sector.

Most people recognise that PPP implementation can mobilise more capital than the government alone can do, by introducing extra capital from the private sector to invest in PPP projects. PPP projects are undertaken when better value for money (VfM) is created compared with what conventional government-funded projects would potentially deliver, such as cost reduction and improved service quality. Furthermore, private developers not only construct but also manage and operate long-term projects, making them consider the efficiency of the project from the design stage and ultimately ensuring the highest construction quality.

INFRASTRUCTURE STOCK AND CAPACITY OF THE PPP MARKET

The total asset value of infrastructure in Korea in 2004 was 388 trillion KRW (US$353 billion) and road and transportation asset value, such as roads, rail, airports and seaports, amounted to 215 trillion KRW (US$195 billion) (Ahn and Kim 2006). Despite the Korean government's investment of a great amount of money in infrastructure areas, South Korea does not have a sufficient infrastructure stock compared with other developed countries such as the US, the UK or Japan (Do and Kwon 2009).

Private investment has been continuously increasing since the introduction of the PPP Act and has been playing a key role in providing infrastructure in a timely manner, complementing public investment. The proportion of private investment to public investment in Social Overhead Capital increased from 4% in 1998 to 18% in 2008. As of September 2009, PPP contracts for 461 projects had been awarded. As shown in Figure 11.1 and Table 11.1, 106 build–transfer–operate (BTO) and 145 build–transfer–lease (BTL) projects have been completed to provide services to the public

Table 11.1: Current status of PPP projects as of September 2009

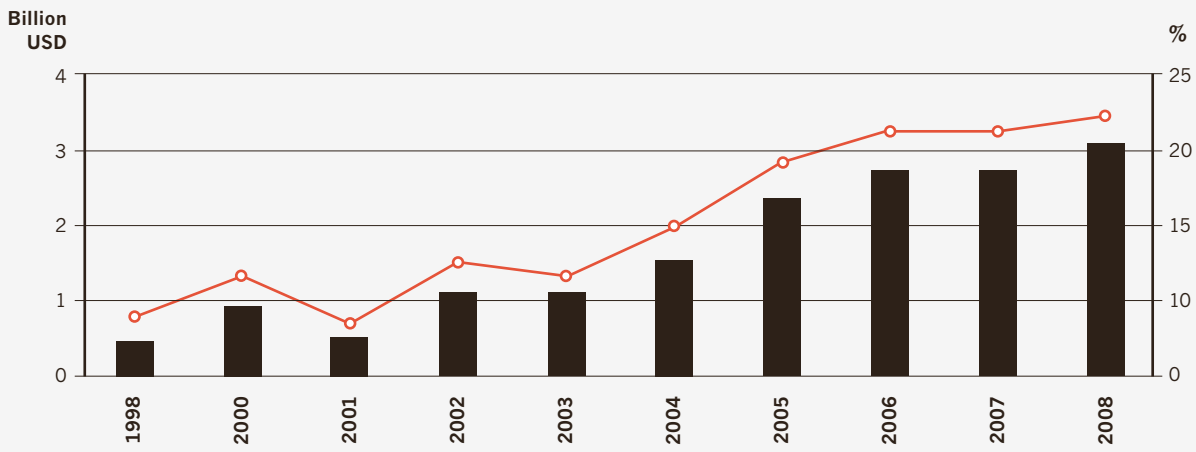
	BTO Projects			BTL projects	Total
	National	Local	Subtotal		
Completed	24	82	106	145	251
Under construction	15	31	46	110	156
Contract awarded	8	9	17	37	54
Total	47	122	169	292	461

Source: KDI (2010).

BTO projects have been widely used in the construction of transportation facilities, including roads, railways and seaports. Road projects account for more than half of all investment, and environmental facilities top the list for the highest number of projects while having the least cost per project (KDI 2010).

BTL projects, which first began in 2005, have been actively used, especially in building and reconstructing old educational facilities such as elementary and middle schools, and university dormitories. Furthermore, BTL projects are making a contribution to expanding and improving sewage systems and military residences, as well as the building of new railways.

Figure 11.1: Trends for private investment



Source: KDI (2010).

Table 11.2: Ratio of government to private sector in billion US$ in %

	1998	2000	2001	2002	2003	2004	2005	2006	2007	2008
Private	0.45	0.91	0.50	1.09	1.09	1.54	2.36	2.73	2.73	3.09
Government	11.54	13.82	14.54	14.54	16.73	15.82	16.64	16.73	16.73	17.82
Ratio (%)	3.9	6.6	3.4	7.5	6.6	9.8	14.2	16.3	16.3	17.3

Source: Public and Private Infrastructure Investment Management Center (2010).

Investment grew by approximately five times from 2001 to reach 7.8 trillion KRW (US$7.1 billion) in 2008. The Minimum Revenue Guarantee (MRG) played an important role in the activation of PPP projects up to the early 2000s. Table 11.2 shows that the ratio of private investment was not reduced by the end of 2008 despite the disappearance of the Minimum Revenue Guarantee in the case of submission of the project proposal by the private sector.

HISTORY OF PPP EVOLUTION

PPP was introduced in Korea by the Promotion of Private Capital into Social Overhead Capital Investment Act in 1994. The Act was legislated for the construction of a highway to Incheon airport under a government initiative. The Incheon International Airport Expressway was the first BTO road project carried out under the 1994 PPP Act. It originally started as a government-financed project but was turned into a BTO project later on to help ease the fiscal burden. Its early completion has played a significant role in the successful operation of Incheon International Airport. Since its completion in 2000, the project has undergone a refinancing process and now all equity holders are financial institutions. The Act was amended by the Act on Private Partnership in Infrastructure (PPI) in 1998. The amended Act included the MRG scheme for overcoming financing difficulties for infrastructure construction projects after the onset of the Asian financial crisis in 1997.

Although the MRG was a factor stimulating PPP projects up to early 2000s, the introduction of MRG has drawn criticism from civil groups. Owing to bad traffic demand forecasting and a growing financial burden, the MRG was eventually abolished in 2006. As typical examples of overestimation of traffic volume, experts cited references to the Incheon international airport expressway, the Cheonan-Nonsan expressway, and the Incheon international airport railway. Table 11.3 shows the gap between estimated traffic volume and observed volume in the case of Incheon airport expressway.

With the amendment of the PPI Act in 2005, a service-contract type (BTL) of public-private partnership was introduced in addition to the existing user-fee type (BTO). According to the PPP Act and its Enforcement ordinance, 46 types of facility in 15 categories, such as road, rail, seaport, airport, water resources, energy and logistics are defined as infrastructure types eligible for PPP projects (KDI 2010).

Table 11.3: Example of traffic demand over estimation (Incheon Airport Expressway) in vol./day/ %

Year	Estimation (A)	Observation (B)	Difference (A-B)	Ratio (A/B)
2001	110,622	51,939	58,683	2.13
2002	121, 496	54,244	67,252	2.24
2003	133,438	55,323	78,115	2.41
2004	146,554	59,780	86,774	2.45
2005	119,026	62,831	56,195	1.89
2006	125,322	65,571	59,751	1.91
2007	131,965	68,711	63,254	1.92

Source: Ministry of Land, Transport and Maritime Affairs (2010).

BTO AND BTL CONTRACTUAL SCHEMES

All types of contractual scheme, including BTO, BOT, BOO and BTL, can be applied. Among them, BTO and BTL schemes are commonly accepted in South Korea (Back 2007, KDI 2010).

In the case of BTO, ownership of the infrastructure facilities is transferred to the central or local government upon completion of construction, and the concessionaire takes the right to operate the infrastructure facilities for a specified period of time. BTO projects are carried out according to the following procedure: after conducting a value-for-money (VfM) test to evaluate its potential as a PPP project, competent authorities announce Requests for Proposals (RFPs), and evaluate proposals for selection. The concessionaire assumes ownership of the infrastructure facilities for a specified period of time after completion of construction, and the ownership is transferred to the central or local government upon termination of the concession period.

In the case of BTL, ownership of the infrastructure facilities is transferred to the central or local government upon completion of construction, and the concessionaire takes the right to operate the infrastructure facilities for a specified period of time, in which case the concessionaire profits from the project by leasing the facilities to the government to use for a period of time set out in the concession agreement. BTL projects are carried out according to the following procedure: a BTL project is initiated by the competent authority, reviewed by the Ministry of Strategy and Finance to decide on an aggregate investment ceiling for the project, and then approved by the National Assembly. The investment ceiling for BTL projects is the aggregate BTL investment cost for the fiscal year. An amount detailing the total limit of all BTL projects as well as the limits for each facility type is submitted to the National Assembly along with the budget plan. In the case of BOT (build–operate–transfer), however, the concessionaire assumes ownership of the infrastructure facilities for a specified period of time after completion of construction, and the ownership is transferred to the central or local government upon termination of the concession period. The procedures from announcement of RFPs to construction and operation are the same as for the BTO contractual scheme.

THE PROCUREMENT PROCESS

Implementation procedure for solicited projects

The Ministry of Strategy and Finance (MOSF) is responsible for administering the PPP Act and its enforcement ordinance as well as the basic plan for the PPP. As the central body in charge of national PPP programmes, the ministry has key roles that include the development of PPP policies and the establishment of comprehensive investment plans. MOSF also chairs the PPP Review Committee, which deliberates on the establishment of major PPP policies and makes key decisions about the implementation of large-scale PPP projects. Procuring ministries are responsible for establishing and coordinating sector-specific PPP investment plans and policies. They also implement and monitor PPP projects.

The government identifies a potential PPP project and then seeks concessionaires for solicited projects. Competent authorities develop a potential project after considering related plans and demands for the facility. They then analyse the procurement options in order to determine whether PPP procurement is more efficient than conventional procurement.

There are a number of important points to consider before making decisions on a PPP project.

- Is the facility qualified for a PPP project as prescribed in the PPP Act and the enforcement ordinance?
- Is the project a high priority for medium and long-term infrastructure investment plans?
- Does it offer more timely benefits than a conventional government-procured project which has budget constraints?
- Will operational efficiency and services improve by taking advantage of creativity and know-how from the private sector?
- Will it be profitable considering the level of user fees and subsidies for BTO projects?

Designation procedures for PPI projects are explained below, when financial support from the government is required.[33]

For projects with total cost of less than 200 billion KRW (US$182 million), prior to designating a PPI project, the competent authority must perform a feasibility analysis through a specialised research organisation. When a project with a total cost of 50 billion KRW (US$45 million) or more, and requiring 30 billion KRW (US$27 million) or more as government subsidy, is to be implemented as a PPI project, however, the competent authority must apply in advance to the Minister of Planning and Budget for a preliminary feasibility study of the project concerned (KDI 2010, PIMAC 2010). Upon designating a PPI project, the competent authority must publish its decision in the official gazette and notify the Minister of Planning and Budget without delay.

For projects with a total cost of 200 billion KRW (US$182 million) or more and with a government subsidy of 30 billion KRW (US$27 million) or more, the competent authority must apply to the Minister of Planning and Budget for a preliminary feasibility study of the project concerned. The competent authority must make a request to the Minister of Planning and Budget for deliberation by the PPP Review Committee while attaching the result of the feasibility study as well as the opinion of the Director of the Public and Private Infrastructure Investment Management Center (PIMAC). The competent authority shall formulate a request for a proposal for a PPI within one year from its designation as a PPI project. The contents shall be published in the official gazette in addition to notification through at least three daily newspapers and on the PIMAC homepage bulletin. A PPI project may be implemented by a private corporation or a joint public and private corporation.

The competent authority shall designate a concessionaire by finalising all negotiations for a concession agreement with the potential concessionaire, which will include the terms and conditions of project implementation. Key elements to be included in the concession agreement are:

- basic information regarding the PPI project, including designation of the concessionaire, the operation and management period, and the relationship of the rights and obligations of the parties to the concession agreement, etc
- the implementation procedure for a project, application for the Detailed Engineering and Design Plan for Implementation (DEDPI), matters concerning guarantees and risks of project implementation, safety control, environmental management, etc
- details of construction, including the commencement date and duration, supervision, levy of liquidated damages, etc
- total project cost and user fees, internal rate of return, and other operating revenue and costs
- details of government support, including guarantee of operating revenue, assistance with applying for authorisation and permission, etc
- maintenance, repair, management and operation of the facilities
- classification of risk types and principles of risk allocation
- conditions and procedures for nullifying the concession agreement, and payment criteria and procedures thereof
- conditions and method of exercising the buyout right of the concessionaire, and
- procedures for concluding negotiations and measures for dispute resolution among negotiating parties, etc (PIMAC 2010).

The competent authority must consult with PIMAC when concluding the concession agreement on projects with a total project cost of 200 billion KRW (US$182 million) or more or those that require deliberation by the PPP Review Committee. The procedure for consultation and review by PIMAC may be exempted for concession agreements where the competent authority has proceeded with the negotiations by commissioning PIMAC to finalise its negotiations.

PIMAC was established under the PPP Act in order to provide comprehensive and professional support for the implementation of PPP projects. Its main duties are:

- to support the government in developing PPP policies and guidelines
- to provide technical assistance throughout the procurement process for PPP projects, including VfM tests, formulation of RFPs, evaluation of project proposals, and negotiations with potential concessionaires
- to organise capacity-building programmes and provide support for foreign investors through investment consultation, and
- to promote international cooperation for knowledge sharing (KDI 2010).

33. PPI is the term commonly used to describe the infrastructure part of PPP.

PIMAC, which is also in charge of the ex-ante evaluation of public investment projects, contributes to enhancing efficiency and transparency in national infrastructure planning through comprehensive and systematic management of both public and PPP investment for infrastructure (KDI 2010).

For concession agreements that include an agreement for government support, the competent authority must refer to the opinion of the Minister for Planning and Budget in advance. The scope of government support covers construction subsidies and long-term loans in addition to subsidies for key facilities, but excludes government payments such as lease fees for BTL projects. Projects with a high share of foreign investors will receive maximum consideration for their foreign investors' opinions with regard to the prevailing language of the concession agreement, dispute resolution clause, etc. The concessionaire must apply for the approval of the DEDPI within one year from its designation as concessionaire. The competent authority must notify the concessionaire in writing of its decision on the approval of the DEDPI within three months from the filing date of the application, except in special circumstances. Finally, after approved DEDPI, solicited projects will be conducted and confirmed as completion of construction.

Implementation procedure for unsolicited projects

The private sector can propose a PPP project for infrastructure that is in high demand but has been delayed by government budget constraints. After considering factors such as demand, profitability, project structure, construction and operating plans, and funding, the private partner creates a project plan and submits the proposal to the competent authority. The private sector may propose profitable and creative ancillary/supplementary projects related to the main PPP project. The competent authority reviews and evaluates the contents and value for money of the private proposal (KDI 2010).

In the case of submission of a project proposal by the private sector, the private sector company must submit that proposal to the competent authority. This proposal must cover a specific list of items:

1. the outcome of the feasibility study of the proposed unsolicited project
2. details of the project proposal
3. the amount and calculation of the total project cost, and a financing plan
4. details of the determination of the concession period or ownership and operation period of the completed facilities
5. a facility management and operation plan
6. an income and expenditure plan for project operation, including such items as user fee revenue
7. details of, and grounds for, implementing supplementary projects, if any; and other necessary matters for the implementation of the project concerned.

The competent authority must request a review of the contents of the project proposal within 15 days from the filing date of the proposal, except in special circumstances such as a need to improve the proposal.

For projects with a total project cost of 300 billion KRW (US$273 million) or more, the director of PIMAC then conducts a value-for-money test that includes a cost and benefit analysis (CBA) comparing how the PPI project would operate if promoted by public procurement, and tests the reasonability of the facility demand forecast.

The value-for-money (VfM) test conducted on projects with a total project cost of 300 billion KRW (US$273 million) or more is carried out as follows. First, there is a feasibility judgement: the cost and benefit analysis is conducted to determine the national economic feasibility of the project. This is followed by a value-for-money judgement: after passing the feasibility judgement test, a comparative analysis is conducted between the public sector comparator and the project proposal to determine whether the project proposal has a higher VfM. Thirdly, there is the establishment of a PFI alternative: when the project proposal shows VfM, a financial analysis is conducted to calculate an appropriate level of project cost, user fee, subsidy scale, etc., to allow the proposal of PFI alternatives.

The Director of PIMAC must submit an opinion on the project proposal to the competent authority and the Ministry of Planning and Budget within 60 days of receiving the request for review of the project proposal from the competent authority, except in special circumstances.

The competent authority must notify the proposer in writing of the official opinion about the project proposal concerned, including, but not limited to, its decision on the possibility of implementing the proposed project by means of private investment, within 60 days from the receipt of the opinion of the Director of PIMAC. When pursuing an unsolicited project as a PPI project pursuant to the Act on PPI, the competent authority shall announce the outlined content of the project proposal concerned in the official gazette, and at least three daily newspapers, in addition to posting on PIMAC homepage bulletin to allow for the third parties other than the initial proposer to submit alternative proposals for the project concerned. The competent authority reviews and evaluates the proposal of the initial proposer and that of the third party to determine the potential concessionaire. The conclusion of concession agreements and designation of concessionaire procedures are the same as for solicited projects.

Feasibility and value-for-money assessment

A preliminary feasibility study was introduced in 1999 to encourage a rational approach to new large-scale projects by enhancing the efficiency of fiscal investment by verifying the feasibility of projects in such aspects as economics, policy analysis, investment priority, proper timing and financing methods, by conducting general research on large-scale development projects.

Whereas a feasibility study focuses mainly on the technical viability, a preliminary feasibility study largely reviews economic and policy adequacy. Also, while a feasibility study is carried out by competent authorities, a preliminary feasibility study is conducted by the Ministry of Strategy and Finance. The National Finance Act, Article 38, serves as a legal basis for a preliminary feasibility study and stipulates that projects requiring not only the approval of the Ministry of Strategy and Finance but also the decision of the National Assembly must undergo inspection and verification in order to corroborate the preliminary feasibility study. Guidelines should be created to establish the criteria by which:

1. the project will be selected
2. an appropriate agency will be set up to conduct a preliminary feasibility study, and
3. a selection will be made of the method and procedures upon which the study will be based .

The aim of conducting feasibility studies and assessing VfM by comparing Private Finance Initiative (PFI) against the public sector comparator (PSC) is to test if PPP procurement would improve the value of taxpayers' money. Therefore, the competent authority uses VfM reports as basic information for making a judgement on whether to move forwards with a PPP project proposed by the private proponent.

Selection methods and procedures

Projects are selected by examining the urgency and necessity of a project's implementation, taking into account the priorities set by the government's medium-term and long-term plans for related areas. The guidelines for each sector (road, railway, airport, harbour, culture, tourism, sports, and science) for preliminary feasibility studies include:

- an analysis of project overview and basic materials
- an economic feasibility analysis
- a policy analysis
- a general evaluation using the Analytic Hierarchy Process technique.

FINANCIAL RESOURCES

Table 11.4 shows the main providers of financial resources for PPP projects: construction companies with an average of 57.11% and bank or insurance companies with an average of 11.98%.

For the financial security of the project, private partners need to maintain a minimum required equity ratio. During the construction period, project companies need to maintain a minimum required equity ratio of at least 20% for a BTO project, or 5% or more for a BTL project. When the investment input of financial investors is above 50% of the total equity, the minimum required equity ratio during construction can be lowered from 20% to 15%.

The concessionaire is allowed to refinance according to changes in the macroeconomic environment, project risk, etc. Investors may see their expected returns increase depending on changes in capital structure and debt financing conditions, etc. Refinancing gains are shared between the concessionaire and the government to benefit both parties. Refinancing gains can be used to lower the level of user fee so that facility users can also benefit from refinancing.

Table 11.4: Investors in government controlled projects in %

	Construction company	Bank or insurance company	Fund or investment company	Mutual-aid or pension fund	Public or state-own company	Others
Road	64.1	11.1	12.8	4.7	5.0	2.2
Seaport	70.0	10.2	4.3	2.3	0	13.2
Rail	58.6	15.6	7.8	4.9	1.7	11.5
Logistics, airport	23.45	5.0	0	0	0	71.55
Environmental, water resources	69.4	18.0	0	2.0	6.2	4.4
Average (%)	57.11	11.98	4.98	2.78	2.58	20.57

Source: Joo et al. (2010).

Financing through the infrastructure fund is also encouraged to diversify the investor profile. The infrastructure fund is an indirect investment facility that collects funds from investors to lend and invest in PPP projects, while also distributing profits to multiple investors. Regulations on asset management and financing have been eased to promote the use of the infrastructure fund. Investments through the infrastructure fund increased from 80 billion KRW (US$73 million) in 1999 to 3.3 trillion KRW (US$3 billion) in 2008, with a total of 10 funds being managed in 2010.

The Korea Infrastructure Credit Guarantee Fund (KICGF) was established by the PPP Act to provide credit guarantees for concessionaires who obtain bank loans from financial institutions or issue infrastructure bonds for PPP projects. KICGF is a public fund established under the PPP Act to guarantee the credit of a concessionaire that intends to obtain loans from financial institutions for PPP projects. It is managed by the Korea Credit Guarantee Fund and funded by the Ministry of Strategy and Finance (KDI 2010).

CASE STUDIES AND FUTURE PERSPECTIVES

The government may pay the shortfall when the actual operation revenue is less than the share of investment risks borne by the government. If the actual operation revenue exceeds expected income revenue, however, it will be redeemed within the limit of the government share of investment. As mentioned in the previous section, the minimum revenue guarantee (MRG) scheme was introduced to overcome financing difficulties for infrastructure construction projects after the onset of the Asian financial crisis in 1997.

Table 11.5 illustrates how total paid revenue of central-government-paid expenses and local-government-paid expenses increased significantly from 2001 to 2008. The guaranteed rate of return of each project shows MRG percentages in the concession agreement. The numbers in brackets are the ratios of the estimated volume and observed volume. Most of observed traffic volumes are not less than 60% of estimated volume. In particular, Incheon airport expressway and railway are attaining into almost 70% of total central government expenditure for MRGs.

Table 11.5: Annual paid revenue and traffic demand accuracy (in million USD)

Projects	2001	2002	2003	2004	2005	2006	2007	2008	Total	Guaranteed rate (%)
Incheon airport expressway	53.7 (47%)	62.1 (45%)	86.6 (42%)	91.7 (41%)	60.0 (53%)	64.5 (52%)	69.3 (52%)	81.8 (47%)	569.9	80
Cheonan-Nonsan expressway	-	-	36.7 (47%)	35.1 (52%)	35.4 (55%)	36.7 (56%)	35.4 (58%)	42.9 (55%)	222.3	82
Daegu-Busan expressway	-	-	-	-	-	30.6 (56%)	30.1 (61%)	43.4 (56%)	104.2	77
Seoul beltway	-	-	-	-	-	-4.3 (159%)	-15.3 (185%)	6.0 (82%)	6.0	90
Mokpo new port phase 1-1	-	-	-	0.7 (62%)	0 (99%)	2.3 (65%)	2.6 (65%)	4.0 (33%)	9.6	90
Mokpo new port phase 1-2	-	-	-	0 (75%)	0.1 (74%)	0 (80%)	0.8 (56%)	1.6 (44%)	2.5	80
Incheon airport railway							99.3 (6.4%)	145.6 (6%)	245.0	90
Government expenses total	53.7	62.1	123.3	127.5	95.5	134.2	237.7	325.4	1,159.6	
Kwangju 2nd bypass	5.6 (52%)	4.8 (61%)	5.7 (59%)	6.3 (57%)	7.8 (54%)	9.1 (53%)	10.6 (50%)	12.7 (45%)	62.8	85
Woomyeonsan tunnel	-	-	-	9.5 (39%)	8.7 (45%)	7.9 (49%)	6.9 (52%)	4.5 (56%)	37.6	79
Machang bridge	-	-	-	-	-	-	-	5.3 (35%)	5.3	80
Local-government expenses total	5.6	4.8	5.7	15.9	16.5	17.0	17.5	22.6	105.8	
Total	59.3	66.9	129.1	143.4	112.1	151.2	255.2	348.1	1,265.4	

Source: Ministry of Strategy and Finance (2010) and the Board of Audit and Inspection of Korea (2010).

Table 11.6: Periods and rates of minimum revenue guarantee (MRG) (under operation)

	Projects	Competent authority	Method	Guaranteed period (years)	Concession agreement	Guaranteed rate (%)
Road (9)	Incheon airport expressway	MLTM*	Solicited	20	1995/10	80
	Kwangju 2nd bypass phase 1	Kwangju	Solicited	28	1997/02	85
	Cheonan-Nonsan expressway	MLTM	Solicited	20	1997/04	82
	Daegu-Busan expressway	MLTM	Solicited	20	1998/03	77
	Woomyeonsan tunnel	Seoul	Solicited	30	1998/05	79
	Seoul beltway	MLTM	Solicited	20	2000/12	90
	Ilsan bridge	Gyeonggi province	Solicited	30	2002/06	90
	Machang bridge	Gyeongnam province	Unsolicited	30	2003/05	80
	Busan-Ulsan expressway	MLTM	Solicited	30	2006/05	Expected rate of return (6%)
Port (4)	Mokpo new port phase 1-1	MLTM	Solicited	20	1997/07	79,77
	Incheon N. port phase 1-1	MLTM	Solicited	20	2001/08	80
	Mokpo new port phase 1-2	MLTM	Unsolicited	20	2001/12	79,77
	Incheon N. port wharf	MLTM	Unsolicited	15	2003/02	80
Environmental	Seoul landfill gas facility	MOE**	Solicited	11	2003/03	90
Airport	Incheon airport oil facility	MLTM	Solicited	11	1997/02	90

*MLTM: Ministry of Land, Transport and Maritime Affairs, **MOE: Ministry of Environment

Source: Ministry of Strategy and Finance (2010) and the Board of Audit and Inspection of Korea (2010).

Table 11.6 shows the guaranteed periods and guaranteed rates, competent authorities and concession agreement dates for currently operating projects. At the start of the introduction of MRG, the guaranteed period and guaranteed ratio were 30 years and 90% respectively.

Most MRG periods for projects signed since 2004 have, however, been reduced to 15 years after the start of operations and the MRG ratio was reduced by approximately 10: in units of five years based on the revised PPI Act in 2003.

Table 11.7 shows the guaranteed periods and guaranteed rates, competent authorities and concession agreement dates for construction projects. The amount of additional MRG burden is expected to increase significantly owing to movement of new projects into the operational phase.

Table 11.7: Periods and rates of minimum revenue guarantee (MRG) (under construction)

	Projects	Competent authority	Method	Guarantee period (yr)	Concession agreement	Guaranteed rate (%)
Road (9)	Busan-Geojae road	Busan	Solicited	20	2003/02	90
	Incheon Bridge (2nd bridge)	MLTM	Unsolicited	15	2003/06	80
	Myungji bridge	Busan	Unsolicited	15	2004/01	80,70,60
	Seoul-Chuncheon Expressway	MLTM	Unsolicited	15	2004/03	80,70,60
	Siheung-Namdong road	Gyeonggi province	Solicited	20	2004/09	90,85,80,75
	Yongin-Seoul road	MLTM	Unsolicited	10	2005/01	70
	Seosuwon-Pyeongtaek expressway	MLTM	Unsolicited	15	2005/01	80.70.60
	N. port bridge	Busan	Solicited	15	2006/01	80,60
	Daegu 4th bypass	Daegu	Unsolicited	5	2008/05	80
Rail (6)	Incheon airport railway	MLTM	Solicited	33	2001/03	90
	New Bundang railway	MLTM	Unsolicited	10	2005/03	80,70
	Yongin light rail	Yongin	Solicited	30	2004/07	90
	Busan-kimhae light rail	MLTM	Solicited	20	2002/12	80,78,75
	Seoul urban rail line 9	Seoul	Solicited	15	2005/05	90,80,70
	Uijeonbu light rail	Uijeonbu	Solicited	10	2006/04	80,70
Port (5)	Ulsan new port phase 1-1	MLTM	Solicited	15	2004/03	90
	Masan port phase 1-1	MLTM	Solicited	14	2004/06	90,80,70
	Pohang new port phase 1-1	MLTM	Solicited	14	2004/06	90,85,80
	Incheon N. port wharf	MLTM	Solicited	15	2005/07	85,75,65
	Pyeongtaek port E. wharf	MLTM	Solicited	15	2005/06	85,75,65
Environmental	Yongin sewage treatment	Yongin	Solicited	15	2005/01	75,65,55

Source: Ministry of Strategy and Finance (2010) and the Board of Audit and Inspection of Korea (2010).

The government has established mid-to-long-term investment plans for PPP projects in order to manage PPP investments at a sustainable level, ensuring the stable conduct of PPP projects. PPP investments are managed as part of national financial planning and are linked to the National Fiscal Management Plan, the government's five-year fiscal plan established by the Ministry of Strategy and Finance.

As shown in Tables 11.5 to 11.7, the MRG on the government financial burden is expected to increase sharply. New demands in the infrastructure sector are expected owing to the rapidly aging population and the increasingly uncertain economic circumstances. Therefore, the government has been trying to reduce and abolish the MRG periods or rates, and to improve the traffic demand forecasting process. Since 2009, the government has been introducing and implementing a refinancing request system. According to the refinancing request system, even if there is no request from the project company, the competent authorities may request to review whether to adopt refinancing measures such as changing capital structure and financing conditions.

If the financial burden of MRG continues to increase after refinancing and revenue increases, the government would consider termination of the contract and acquisition of the project. A typical example is the Korea Railroad Co., which is trying to acquire the equity of the Incheon airport railway from the construction companies' consortium.

CONCLUSIONS

In the face of an aging population, welfare expenses are gradually rising, limiting public investment in infrastructure. Thus, the government is actively promoting private investment in areas where private entities prove more efficient and competitive in supplementing the government's budget. Therefore, PPPs will continue to play an important role in expanding and improving infrastructure facilities in South Korea.

The use of PPP is not expected to be smooth for the following reasons. First, the Korean government adopted a double entry bookkeeping system in January 2009 to improve the efficiency, clarity and responsibility of public financial affairs. There have been many problems in operating the new system due to difficulties in understanding the new accounting method, a limited preparatory period, etc. With the introduction of International Financial Reporting Standards from 2011 on, the pressure on the construction sector is expected to grow. For example, the project financing debts of a special purpose company will be moved to the parent company's debt. Therefore, restructuring, mergers and acquisitions in the construction industry are expected to be activated with the introduction of IFRS.

Second, in a now rapidly aging society, the creation of new demand is expected to be difficult. This feasibility problem is the largest problem the infrastructure sector is facing. The current population of over-65-year-olds accounts for 8.1% of the total population in South Korea. By 2016, this age group is expected to increase to 12.4% of the population. Combined with a low birth rate, the financial situation is expected to become more difficult owing to a decline in the working-age population.

Third, following on from the introduction of MRG, annual charges to be paid by the government are expected to grow significantly. In other words, no additional government funding can be afforded.

REFERENCES

Ahn, H. and Kim, M. (2006), *Regional Allocation of Transportation Infrastructure Investment and Development of Local Economy* (Seoul: Korea Research Institute for Human Settlements).

Back, S. (2007), 'A Study on the Evaluation of Value for Money in Privately Provided Infrastructure with a Focus on BTO projects', *Journal of Korean Society of Transportation*, 25: 49–59.

Do, M. and Kwon S. (2009), 'Current Status and Perspectives of Asset Management in South Korea', proceeding of the International Workshop on Asset Management Implementation in Asian Countries, International Islamic University Malaysia, Kuala-Lumpur: 17–35.

Joo. J., Ha, H. and Park, D. (2010), 'Analysis of Factors of IRRs and Spread on Korea's BTO Projects', *Journal of Korean Transportation*, 28: 135–50.

KDI (Korea Development Institute) (2010), *Public-Private Partnership in Infrastructure in Korea*, <http://pimac.kdi.re.kr/eng/download/brochure2.pdf>.

Ministry of Land, Transport and Maritime Affairs (2010), [website] <http://www.mltm.go.kr>.

Ministry of Strategy and Finance (2010), [website] <http://mosf.go.kr>.

PIMAC (Public and Private Infrastructure Investment Management Center) (2010), 'Act on Private Participation in Infrastructure', <http://pimac.kdi.re.kr>.

The Board of Audit and Inspection of Korea (2010), [website] <http://www.bai.go.kr>.

12. Review of public private partnership implementation in Thailand

Veerasak Likhitruangsilp, Chulalongkorn University

INTRODUCTION

Infrastructure plays a crucial role in the economic development and improvement of living standards of people in every nation. Thailand has encountered various infrastructure challenges in recent decades resulting from the increasing demand for infrastructure that responds to economic development and international competition, growth of urban areas, and global energy crises.

Public private partnership (PPP) has been implemented for the delivery of infrastructure projects worldwide. PPP has been adopted for delivering both physical and social infrastructures that are necessary for extensive economic and social development. Creating infrastructure development by forming partnerships with the private sector yields several benefits. Governments, which usually have limited resources, can use the private sector's resources in infrastructure development. They can also access state-of-the-art technologies and expertise available in the market. Moreover, the state and the private sector can share project risks, especially financial risk, which it might be impossible for a single party to bear, while the private sector partner can enjoy the profits gained from the investment.

This chapter reviews the PPP implementation in Thailand by focusing on the following issues: the history of PPP evolution, national policy development, the institutional framework, the procurement procedure, types of contract, the relationship between privatisation policy and PPP, foreign influence, and weaknesses of the current PPP framework. It discusses four key infrastructure sectors in Thailand: transport, energy, telecommunications and public utilities.

HISTORY OF PPP EVOLUTION IN THAILAND

PPP implementation and management strategies are diverse. In Thailand, there have been a large number of infrastructure projects delivered by using PPP. Nonetheless, in Thailand the regulatory and legal frameworks underlying these infrastructure projects are considered incomplete and fragmented, and the actual implementation and degree of success of the projects have varied widely (Valentine 2008).

Until the late 1980s, infrastructure project development in Thailand was exclusive to state enterprises. In 1988, the government, for the first time, invited the private sector to invest in a transport infrastructure project in Bangkok. The Express and Rapid Transit Authority of Thailand, a state enterprise, granted a 30-year build-transfer-operate (BTO) concession to a private company. The contract involved the construction of a six-lane, 40km elevated expressway worth US$900 million. This BTO scheme was specifically designed to circumvent national legislation that prohibits private ownership of public infrastructure (Nikomborirak 2004).

In other cases, the investments were shared by the state and the private sector. For example, for the construction of the first subway line in Bangkok, the state financed the construction of civil works (tunnels, rails and stations) with the approximate amount of US$2 billion whereas the private sector, a multinational joint venture, invested approximately US$350 million in the rolling stock and the system operation. The government realised that this public transport service would not be commercially viable without some state subsidy. The cost of the subway project is extremely high compared with the cost of other public transport systems such as bus or light rail networks.

Another example of private participation in transport infrastructure projects is the construction and operation of ports. The private sector operates all eight docks at the Lam Chabang Seaport on the eastern coast of Thailand. Five of the eight docks are owned by the Port Authority of Thailand, a state enterprise, and operated under management contracts; major shipping companies own the other three docks.

In 1992, the private sector began to participate in investment for electricity generation. The capacity of the state enterprises was so limited that it could not catch up with the increasing demand for electricity due to the rapid economic growth at that time. As a result, seven independent power producers (IPPs) were selected to sign long-term power purchase agreements (PPAs) with the total generation capacity of 5,943 MW and total private financing of US$10 billion.

In the same year, several major telecommunications concessions were granted to the private sector, including fixed line and mobile phone services, and paging. Owing to the constraint imposed by the domestic law, rather as in the case of transport infrastructure mentioned above, the private sector was prohibited from owning any telecommunications infrastructure. As a result, the BTO scheme was used in these concession contracts, including the concession to install 1.5 million fixed line services in the provinces and 2.6 million lines in Bangkok, as well as two cellular concessions with unlimited scale of operation. By 2004, there were more than 40 telecommunications concessions granted to private operators such as VSAT, and companies running a broadband network and yellow pages (Nikomborirak 2004).

The private participation in water utilities has been limited compared with other types of infrastructure even though there is a desperate need for developing the infrastructure. Of Thailand's 62 million people, 38 million must rely on local wells or low-quality small-scale local water supply systems, which contribute to social and environmental problems. In 1992, the Provincial Water Authority (PWA) of Thailand, a state enterprise, set up a company named the East Water Company to produce and distribute water to the eastern seaboard industrial estates. Even though the company was at first wholly state-owned, it was later privatised with a minority holding of 44% retained by the state. In 1995, the PWA granted a build-operate-transfer (BOT) contract to a private company to modernise the water distribution system and build water purification plants in Pathumtani province. Since then, there have been several build-own-operate (BOO) contracts awarded for

the provision of raw water, water treatment, and local distribution. Even so, these contracts provide less than one per cent of the total water supply provided by the state-owned water authorities.

In the early 2000s, the government focused on privatising the state enterprises, especially in the telecommunications and the energy sectors. There were both successful and unsuccessful examples resulting from this policy.

NATIONAL POLICY ON PPP

To date, the government has been solely responsible for investment in infrastructure projects and has relied on annual budgets, loans and financial assistance from foreign countries. The projects were executed by government agencies or state enterprises on the basis of the policy of their responsible ministries. Owing to economic slowdowns and lack of funding sources, the government has become interested in private funding to alleviate its financial burden.

So far, the PPP schemes that have been adopted for infrastructure project development in Thailand can be summarised as follows (NESDB 2004).

1. **Turnkey contracts** are those where the private sector is responsible for design and construction under the provisions of contracts. The private sector earns a fixed amount of payment as specified in the contract when the project is completed, whereas the state owns the facilities. An example of this contract is the Bangna-Chonburi Expressway project.

2. **Concession agreements** are those where the state grants the private sector the right to design, build, manage, collect fees, and maintain infrastructure facilities under the provisions of agreements and the state's supervision. Typical concession periods range from 15 to 30 years. The revenue sharing schemes are also diverse. The concession agreements entail several forms of contractual arrangements.

   – In build–transfer–operate (BTO) projects, the private sector must transfer the ownership of infrastructure to the state immediately after the construction is complete. Notwithstanding this, the private sector partner continues administrating the facility until the contract expires. Examples of infrastructure projects under this contractual arrangement are Sriratch Expressway, Bangna-Bangpa-in Expressway, Donmuang Tollway, fixed line services (TA and TT&T), and mobile phone services (AIS and DTAC).

   – In build–operate–transfer (BOT) projects, the ownership of infrastructure is transferred to the state at the end of the concession period. Examples of projects under this form of concession are the BTS elevated train, the three docks at Lam Chabang Seaport, and the water supply project at Pathumtani province.

   – In build–own–operate (BOO) projects, the private partner does not have to transfer the ownership to the state, but the state agrees to purchase products or services during the contractual period. Examples of such infrastructure projects are the small power producer (SPP) and independent power producer (IPP).

3. **Service contracts** are those where the private partner performs some form of service for the state, such as collecting road tolls. These are usually short-term and low-amount contracts.

4. **Lease contracts** are those where the state invests in the construction of infrastructure and then leases it to the private sector for operating the facility for 25 to 30 years. An example under this contractual arrangement is the docks at Lam Chabang Seaport.

The main providers of financial resources for PPP projects in Thailand are the government budget, domestic loans, and foreign loans such as from the Japan Bank for International Cooperation (NESDB and World Bank 2008).

According to the NESDB and World Bank (2008), most of the infrastructure development in Thailand has been done in response to demand rather than being planned strategically. Its availability and accessibility are no longer a challenge. Now the country needs to focus more on the quality of service delivery, management, and regulation. Most importantly, Thailand needs a clear policy framework and development direction, set by the policymakers and based on reliable information.

The Tenth National Development Plan (2007–11) addresses the infrastructure development strategy in three main areas:

1. infrastructure and logistics services,

2. energy efficiency and alternative sources of energy, and

3. the framework for overall infrastructure development.

The summary of each area is shown in Figure 12.1.

Figure 12.1: Summary of the Tenth National Development Plan (2007–11) infrastructure development strategy

1. Development of infrastructure and logistics services to support production structural adjustments. Infrastructure development aims to support the competitiveness and enhance the efficiency of the private sector in both production and service sectors.

   (a) Develop up-to-date and efficient transport, logistics services and telecommunication systems.

   - Develop a domestic and international logistics network through multi-modal transportation networks, feeder systems, and distribution centres at strategic production locations. Enhanced trade facilitation is also a key concern.
   - Enhance efficiencies in logistics management within the production sectors, particularly along the supply chain.
   - Support transport modes and transport management that are energy-efficient, particularly development of rail systems, waterways, and delivery of energy through pipelines. Energy-saving transport and increased use of modern technology to reduce the cost of transport is encouraged.
   - Develop an urban mass-transit network to enhance efficiency, safety, time-saving, and reduction of energy use.
   - Develop a telecommunications network that is efficient and up-to-date. Competition in service provision and the importance of a return on investment are emphasised, in order to serve production, private, and service sectors, and to enhance government's services.

   (b) Transparent and efficient management of infrastructure under stakeholders' participation.

   - Create stakeholder participation in infrastructure project development.
   - Emphasise careful project studies on feasibilities, environmental impacts, social impacts, and health-related impacts to ensure the project's viability, with clear with clear mitigation plans .
   - Support public-private partnership in infrastructure investment through improved regulations and laws. Regulators for each sector are important for consumer protection and transparent and fair competition.
   - Support demand management initiatives that aim to create awareness in efficient use of resources.

2. Improved energy efficiency and expedition of alternative energy initiatives in order to reduce energy imports, costs to both producers and consumers and pollution.

   (a) Find new energy sources, both domestic and international, and secure energy reserves that ensure long-term energy security for Thailand.

   (b) Increase energy efficiency in transport, manufacturing, and household sectors through incentives and law enforcement. For example, provide investment incentives to attract high-value-added industries with low-energy consumption and make regulations that encourage importing energy-inefficient machinery. Other strategies for enhancing energy efficiency are proper city planning, structural reform of transport, logistics management, development of rail and waterways as alternative modes of transportation, and industrial cluster development.

   (c) Campaign for energy conservation and for alternative energy use in every sector. For example, promoting NGV, gasohol, and biodiesel for vehicles. Consultation services for households, and private and public organisations, about alternative energy and energy efficiency to help create awareness in energy conservation.

   (d) Research alternative and renewable energy including new fuels and electricity-generating technology. Research should encompass technical, economic and environmental aspects of alternative and renewable energy. The programmes should also include capacity-building activities and public information dissemination of research results.

3. A framework for fair distribution of the benefits of infrastructure development, particularly in favour of rural areas. This is to enhance access, ensure sufficient provision and be responsive to the demand for infrastructure. Well-established stakeholder participation, expanded coverage on telecommunications and media, access to clean water through piped water systems in rural areas, and city planning, which will bring residents close to production bases, should lead to better distribution of infrastructure and related services around the country. This should in turn contribute to the alleviation of a rural–urban disparity.

Source: NESDB and World Bank 2008: 18–9.

The institutional framework

The institutional frameworks for different infrastructure sectors are diverse. Tables 12.1 to 12.5 show the institutional frameworks for five main infrastructure sectors. For example, the institutional arrangements for the land transport sector are characterised by several actors such as state agencies, state enterprises, and the private sector. Since 2002, policies have been formulated by the Office of Transport and Traffic Policy and Planning (OTP) and the Ministry of Transport (MOT) with oversight by the Commission for the Management of Land Traffic. The Department of Land Transport is the main regulator but its authority is limited to bus operations, vehicle safety and road transport only. Rail and mass rapid transit are not within its regulatory scope. There are several overlaps of regulatory and implementing functions among several agencies. Some agencies, such as the State Railway of Thailand (SRT), the Mass Rapid Transit Authority and the Bangkok Mass Transit Authority, act as both regulator (ie regulating service providers operating under concessions granted by them) and operator (ie competing in the same service as their concessionaires). This clearly leads to a governance issue and potential conflicts of interest. Since there is no single regulatory agency that regulates all modes of transport, it creates difficulties to established integral, coordinated, long-term policies on multi-model transport (NESDB and World Bank 2008).

The institutional frameworks for infrastructure in Thailand are a fragmented hierarchy where different bodies have assumed various responsibilities across several sectors. For example, in the transport sector, there are six departments within the MOT, each of which can grant and manage PPP projects, rather than the MOT itself being responsible for these regulatory duties.

Table 12.1: Institutional framework for land transport

Agency	Policy	Regulation and monitoring	Implementation
Commission for the Management of Land Traffic	√		
Ministry of Transport	√		
Office of Transport and Traffic Policy and Planning	√		
Department of Land Transport		√	√
Department of Highways		√	√
Department of Rural Roads			√
Bangkok Metropolitan Authority		√	√
State Railway of Thailand		√	√
Expressway & Rapid Transit Authority of Thailand		√	√
Mass Rapid Transit Authority of Thailand		√	√
Bangkok Mass Transit Authority		√	√
The Transport Co., Ltd.		√	√
Private sector			√

Source: NESDB and World Bank (2008).

Table 12.2: Institutional framework for water transport

Agency	Policy	Regulation and monitoring	Implementation
Ministry of Transport	√		
Office of Transport and Traffic Policy and Planning	√		
Marine Department		√	√
Port Authority of Thailand		√	√
Thai Maritime Navigation Co., Ltd.			√
Bangkok Dock Co., Ltd.			√
Private sector			√

Source: NESDB and World Bank (2008).

Table 12.3: Institutional framework for air transport

Agency	Policy	Regulation and monitoring	Implementation
Ministry of Transport	√		
Office of Transport and Traffic Policy and Planning	√		
Department of Civil Aviation		√	√
Thai Airway International PCL			√
Airport of Thailand PCL		√	√
Aeronautical Radio of Thailand			√
Private sector			√

Source: NESDB and World Bank (2008).

Table 12.4: Institutional framework for electricity

Agency	Policy	Regulation and monitoring	Implementation
National Energy Policy Council	√		
Ministry of Energy (ie EPPO)		√	
Energy Regulatory Board (ERB)		√	
Electricity Generation Authority of Thailand (EGAT)			√
Metropolitan Electricity Authority (MEA)			√
Provincial Electricity Authority (PEA)			√
Private sector			√

Source: NESDB and World Bank (2008).

Table 12.5: Institutional framework for telecommunications

Agency	Policy	Regulation and monitoring	Implementation
Ministry of Information and Communication Technology	√		
National Telecommunication Commission	√	√	
TOT Corporation Public Company Limited			√
CAT Telecom Public Company Limited			√
Private sector			√

Source: NESDB and World Bank 2008.

PROCUREMENT PROCEDURE

The existing legal framework for PPP regulation in Thailand is derived from the Private Participation in State Undertakings Act, B.E. 2535 (1992), which was originally enacted by the government to ensure transparency in the undertaking of large-scale PPP projects whose amount exceeds one billion THB. Figure 12.2 illustrates the procurement procedure for PPP projects in accordance with this law.

The law outlines the internal processes for the government to follow to prevent corruption, rather than outlining the necessary components of a good regulatory and institutional framework for PPPs. In addition, only certain types of PPP project (eg BOT and BTO schemes) are covered by the Act whereas several other schemes, including those developed since 1992, such as the BOO and turnkey PPP models, are not covered. Owing to the incompleteness of the Act, many PPP projects that have been developed and implemented in Thailand since 1992 have been able to exploit several different loose interpretations of the law as their legal framework. Another limitation of this Act is that it does not address risk management for PPP projects. The law does not provide any methodology for identifying, analysing, allocating, and mitigating risks in PPP infrastructure project development, even though this is one of the most important considerations in developing PPP projects (Valentine 2008).

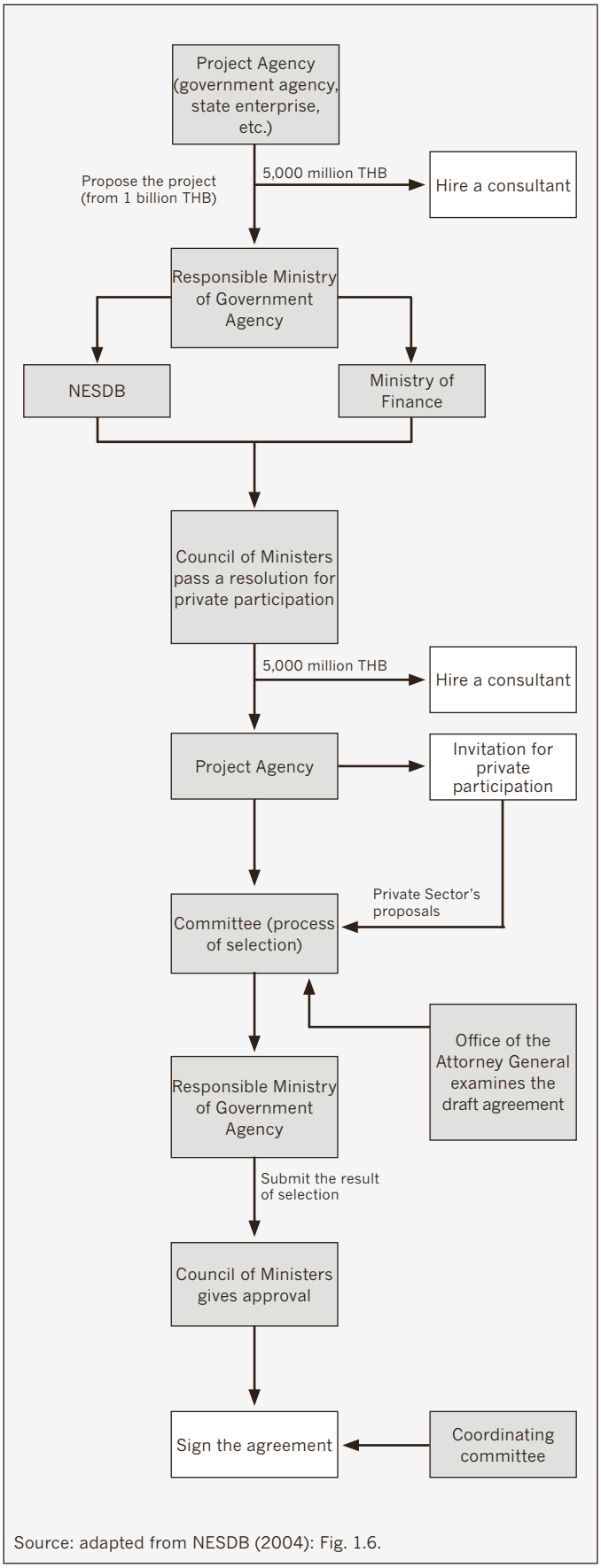
CONTRACT

There is no official guidance on standardisation of PPP contracts in Thailand. Typically, the project agency initiating a new PPP project hires a consultant to assist in preparing the contract. Then, according to the Private Participation in State Undertakings Act (Section 20), the draft contract must be examined by the Office of the Attorney General before the contract can be executed. In addition to being used for the current PPP project, the approved contract can be used again in future for similar PPP projects by making minor changes to the wording.

Common characteristics of Thai PPP contracts can be summarised as follows (Wityatem 2007). They:

- are non-standardised
- are long-term
- include the right to supply goods or services
- set a regulated price
- are made at net cost
- include a lump sum payment spread over the construction period
- cover delay and cost overrun concerns
- allow the private sector to collect all revenue
- do not involve government subsidies for projects.

Figure 12.2: Procurement procedure of PPP projects in Thailand



Source: adapted from NESDB (2004): Fig. 1.6.

RELATION BETWEEN PRIVATISATION POLICY AND PPP

The relation between privatisation policy and PPP depends on the infrastructure sector. The details are as follows (NESDB and World Bank 2008).

Transport sector

For land transport, private participation plays a moderate role in the road transport infrastructure, most of which is in the form of concessions under the Private Participation in State Undertaking Act, B.E. 2535 (1992). Construction of most highways and major roads has been funded by the government budget whereas concessions have been granted for road maintenance. The Department of Highways (DOH) and Expressway and Rapid Transit Authority (ETA) has granted concessions to private companies for some toll roads and expressway projects in the form of build–transfer–operate (BTO) contracts. For example, the Don Muang Tollway is operated under a concession granted by DOH, and the Second Stage Expressway is operated under another, granted by ETA.

Private participation is more dominant in urban transport: mass rapid transit projects. Major projects such as the Bangkok Transit System and the Mass Rail Transit (MRT) were financed with private participation. The BTS or Sky Train was wholly financed by a private company, the Bangkok Mass Transit System Public Company Limited (BTSC), under a concession granted by the Bangkok Metropolitan Administration in the form of a build–transfer–operate (BTO) contract. In this project, not only did BTSC invest in the infrastructure, but it also operates and maintains the system. For the MRT or the subway line, the Mass Rapid Transit Authority, a state enterprise, invested in all civil infrastructures and granted a 25-year BTO concession for the operation and maintenance of the system to a private company, the Bangkok Metro Company Limited.

In the case of water transport, the Port Authority of Thailand (PAT) is a state enterprise that is responsible for the management of all seven deep-sea ports, including two main seaports, Bangkok Port and Laem Chabang Port. At Laem Chabang Port, all eight berths are operated by private companies with PAT acting as the supervisor. Five of them still belong to PAT, which contracted private companies to manage the port under lease contracts. Three berths belong to major shipping companies, which also operate them.

For air transport, major airports in Thailand are owned and operated by Airport of Thailand (AOT), formerly a state enterprise which became incorporated and acquired a public company status in 2002. AOT is currently responsible for six of the twelve international airports in the country. Other, regional, airports are the responsibility of the Department of Civil Aviation. Some domestic airports were wholly financed by private airline companies to serve their own routes. AOT mainly relies on its own funds or on loans to finance projects. For example, Suvarnabhumi Airport was funded 30% by AOT, and the remaining 70% was funded by a loan from the Japan Bank for International Cooperation.

Energy sector

There have been continuous privatisation efforts in the power sector. The government has been attempting to privatise the Electricity Generating Authority of Thailand (EGAT) and restructure its role to break up its monopoly in power generation and transmission. Thus, this infrastructure sector has been gradually liberalised with increasing private sector participation in power generation through EGAT's IPP, SPP, and VSPP ('very small power producer') programmes. In addition, two EGAT subsidiaries, Electricity Generating Company and Ratcharburi, were established as private stock-listed vehicles, with EGAT participation at 25% and 45% respectively.

In 2003, the Cabinet approved the latest power industry restructuring model, called the 'enhanced single buyer model'. According to this model, EGAT will remain the country's sole electricity buyer, transmitter, and wholesaler while the private sector will compete with EGAT in power generation.

EGAT became a partial corporate in June 2005 but the total privatisation was repealed following a Supreme Administrative Court ruling, which ordered the suspension of the initial public offering and listing of EGAT in the stock market in 2006. The privatisation of EGAT currently remains on hold.

Private participation in the petroleum industry has been active from upstream to downstream, especially by foreign entities. Private oil companies bid for concessions from the government to explore and develop oil and gas fields. In contrast, competition in the natural gas industry is still limited. The Petroleum Authority of Thailand (PTT) has significant monopoly control by acting as the sole purchaser, transporter and distributor of natural gas.

Regarding privatisation, the former public Petroleum Authority of Thailand was incorporated in 2001 but the majority of its shares are still held by the Ministry of Finance. The incorporation of PTT was implemented as a single conglomerate entity (ie transmission, distribution pipelines and gas trading businesses were not unbundled before it was privatised).

Telecommunications sector

Until the 1990s, Thailand's telecommunications sector was characterised by a duopolistic structure. Telephone Organization of Thailand (TOT) owned a statutory monopoly in domestic telephone services while CAT had a monopoly over the provision of the international Internet gateway (IIG) and Internet services. In the 1990s, these state monopolies began to grant concessions to private operators. Both granted several such concessions on a BTO contract basis. For fixed-line services, concessions were granted to two private operators, True and TOT. For

mobile phone services, in 1990, TOT granted the concession to AIS, while CAT granted a concession to UCOM (later TAC and DTAC). The two private companies have since established themselves as leaders in the mobile phone market.

Recently, the market has been penetrated by foreign telecommunications companies. In December 2005, the Telecommunications Business Law was amended, effectively increasing the limit of allowable foreign ownership from 25% to 49%. In 2006, the two largest mobile phone operators, AIS and DTAC, were bought by Singapore-based Temasek and Norway's Telenor AS respectively.

FOREIGN INFLUENCE

According to Section 7 of the Private Participation in State Undertaking Act, B.E. 2535 (1992), if a PPP project entails fund or assets exceeding five billion THB, the project agency must hire a consultant who must prepare a separate report with the particulars as prescribed by the NESDB. Thus, use of foreign consultants is quite common in Thai PPP projects. In practice, these foreign consultants usually form teams with domestic consultants.

CONCLUSIONS

The use of PPP in infrastructure project development has been gradually increased since the 1980s, starting with transport infrastructure projects, and expanding to energy and telecommunications projects during the 1990s. There has only been a very limited use of PPP in the water utility sector despite that sector's urgent need for investment and further development to address serious underlying social and economic problems.

The main providers of financial resources for PPP projects in Thailand are the government budget, domestic loans, and foreign loans. Most infrastructure development in Thailand has been responsive to demand rather than being planned strategically. The availability of PPP is no longer challenged but the country needs to focus more on the quality of service delivery, management, and regulation. Most importantly, Thailand needs a clear policy framework and strategic development direction formulated by the government and based on reliable information.

The Thai PPP regulatory and legal framework still has many flaws that might diminish the benefits of the PPP implementation (Valentine 2008). Critical weaknesses of the Thai PPP framework are:

- an incomplete and obsolete legal framework
- institutional and regulatory fragmentation
- undue political intervention.

The existing legal framework for PPP regulation in Thailand is derived from the Private Participation in State Undertakings Act, B.E. 2535 (1992), which was originally enacted by the government to ensure transparency in the undertaking of large-scale PPP projects whose amount exceed one billion THB. The law outlines the internal processes of the government to prevent corruption and does not stipulate the necessary components of a regulatory and institutional framework for PPPs. Only certain types of PPP projects (eg BOT and BTO schemes) are covered by this Act whereas several other schemes, including those developed since 1992, are not covered (eg BOO and turnkey PPP models). Owing to the incompleteness of the Act, many PPP projects that have been developed and implemented since 1992 have been able to use several different loose interpretations of the law. The 1992 Act does not address risk management for PPP projects.

There is no official guidance on standardisation of PPP contracts in Thailand and contracts are drafted for specific projects, subject to approval by the Attorney General.

The institutional frameworks for infrastructure in Thailand are different for each sector and present a fragmented hierarchy where different bodies have assumed various responsibilities across several sectors.

In order to resolve these problems, short-term and long-term strategies have been proposed. The short-term strategies include creation of a national PPP unit, legislative amendments and human resources development. In the longer term, the development of a comprehensive PPP framework is envisaged. It remains to be seen if the current National Development Plan (2007 – 2011) will address these issues as promised.

REFERENCES

NESDB (2004), *Infrastructure Development Strategy for the Enhancement of National Competitive Capabilities. Specific Study Report on Pricing Policy, Government Subsidy Policy, and People Participation in Large-Scale Project Management* [in Thai] (Bangkok).

—— and World Bank (2008), *Thailand Infrastructure Annual Report 2008*, Document prepared jointly by NESDB and the World Bank under the Thailand—World Bank Country Development Partnership for Infrastructure. <http://siteresources.worldbank.org/INTTHAILAND/Resources/333200-117747576359 8/3714275-123440 8023295/5826366-12344081 05311/full-report.pdf>.

Nikomborirak, D. (2004), *Private Sector Participation in Infrastructure: The Case Study of Thailand*, ADB Institute Discussion Paper No. 19 (Tokyo: Asian Development Bank Institute).

Valentine, J. (2008), *Public Private Partnerships in Infrastructure: Best-Practices from the International Experience and Applications for Thailand*, Report of the Infrastructure Projects Office (Bangkok: NESDB).

Wityatem, N. (2007), *Public Private Partnership* (Presentation to the Policy and Planning Division, State Enterprise Policy Office, Ministry of Finance) 16 November 2007, (Bangkok).

13. Thirty years of private finance in the United Kingdom

Graham M. Winch, Manchester Business School [36]

INTRODUCTION

The UK's experience with the privately financed supply of infrastructure for the delivery of public services is now mature. The policy inaugurated with the White Paper on the Channel Fixed Link (CFL) in 1984 and formalised as the Private Finance Initiative (PFI) in 1992 now has a substantial track record of delivery. This chapter presents a narrative of this policy development and provides an assessment of its costs and benefits to date.

THE SOCIAL AND POLITICAL CONTEXT

When the Conservative government arrived in power in 1979 all utilities and transportation in the UK were in public sector ownership. Similarly, the public sector owned and operated the vast majority of hospitals, schools and other public service providers. The private sector was largely restricted to the supply of infrastructure, while finance came from general taxation and service provision was by public sector employees. The new administration set about privatising the utilities and by 1997, the end of its long period in office, vast areas of the former public sector were in the private sector in terms of finance, ownership and operation. Where users had traditionally paid for the service provided, privatisation was broadly effective.

Where the public was not already used to paying directly for the service provided direct privatisation was not possible, largely for political rather than technical reasons. For instance, a commitment to health services and school education free at the point of use was a political imperative throughout the period. Similarly roads, with the occasional exception of bridges and tunnels, are technically difficult to toll and there is significant public opposition to the imposition of payments for use. This left two perceived alternatives. The first was outsourcing of service delivery in areas such as catering, waste disposal and IT. Where significant capital investment was required and service delivery was to be retained in the public sector, the second innovative solution was private finance. While the details of arrangements vary, the private financing of public infrastructure essentially involves the formation of a special purpose vehicle (SPV), which raises capital to develop the infrastructure and is then reimbursed by payments from either users or the government. These processes of reform were taken up enthusiastically when the Labour Party came to power in 1997, and the new Conservative and Liberal Democrat coalition administration of 2010 appears to have no principled objection to the use of private finance although it is facing pragmatic challenges.

THE UK EXPERIENCE WITH PRIVATE FINANCE

We can identify four eight-year phases of the UK experience:

- tentative steps with concessions 1984–91
- additionality through PFI experimentation 1992–99
- seeking value for money in public procurement 2000–07
- retrenchment and reflection from 2008 on.

The private finance policy was launched with a small number of infrastructure projects during the 1980s where the user reimbursed the SPV directly – a radical innovation in the UK context (Marcou 1992). The first was the Channel Fixed Link (CFL) swiftly followed by the Dartford, Severn, and Skye toll bridges. Emboldened by this success, in 1992 the Conservative administration launched PFI, where the SPV is not paid directly by users, but reimbursed by the relevant public sector agency through a unitary charge for facility availability and service provision. Progress was slow at first, as both the government and potential suppliers learned how to put together PFI deals; in this they were aided from 1993 on by the Private Finance Panel (PFP), initially chaired by the chief executive of the SPV for the CFL. In 1994, the design–build–finance–operate (DBFO) method of procuring roads was launched: a method which relied for income upon shadow tolls paid by the government rather than on charges to road users. The Public Private Partnership Programme (4ps; now Local Partnerships) was set up in 1996 to extend the initiative to local government. In areas such as health and schools, legal problems regarding the status of health trusts and local authorities delayed deals while, more generally, the bidding procedures were widely criticised as costly and time-consuming, and the public sector displayed a lack of expertise in this challenging new area. Despite some high-profile successes in achieving deals in the transport and prison sectors, PFI was in difficulty by the time of the election in May 1997.

The incoming Labour administration acted swiftly by abolishing the PFP and launching a full review of PFI. As a result of the Bates review, published in June 1997, bidding procedures were overhauled, and legislation was introduced to clarify the status of National Health Service trusts. A Treasury Taskforce was established to promote what were now called public private partnerships (PPP), and in 1998 deals with a capital value of £2085 million were signed, a major increase in the rate of deal completion. In order to address further outstanding problems, a second Bates review was established and the results published in July 1999. One outcome was the establishment of Partnerships UK in 2000 as a promoter of private finance at national level to complement 4ps. These reviews formed the basis of the subsequent strong development of private finance during the third phase.

34. I am grateful to Graham Ive and Dennis O'Keefe for their constructive comments on this chapter. Neither, of course, bears any responsibility for the final version.

Research conducted by HM Treasury (2003) found that 88% of construction projects were on time or completed before the planned date for facility availability. In just over 20% of cases, the unitary charge payment increased against budget, but in all cases this was due to changes in user requirements by the public sector. The report concluded that PFI was delivering certainty in infrastructure asset acquisition for the public sector. Complementary research by the National Audit Office (NAO 2003), which was focused on the construction phase, reported in similar terms: 76% of projects were available for use on time or early and only 8% were delayed more than two months; 70% of facilities had no increase in unitary charges and the majority of increases were due to either changes in user requirements or regulatory issues. Nonetheless, HM Treasury identified two problem areas.

- Information technology projects had a much poorer record of delivery, and most of the successful IT projects had renegotiated their contracts and moved away from the private finance model.

- Smaller projects – defined as those worth less than £20 million – tended to suffer from very high transaction costs. While delivery of these projects was satisfactory, the existence of significant economies of scale in deal negotiation meant that smaller deals carried proportionally higher transaction costs.

As a result of this research, the report recommended that privately financed deals be abandoned for IT facilities, and that smaller deals such as schools and primary health care facilities be bundled into programmes called strategic partnerships, serving an administrative area.

Despite these restrictions, the use of private finance continued to grow, peaking in value (over £7 billion) of deals signed in 2006 before beginning to fall away sharply. There would appear to be a number of reasons for this change in growth pattern.

Many of the viable opportunities for larger deals on greenfield sites had already been taken and brownfield projects are generally less viable for private finance.

- There was growing awareness of the limits to private finance, particularly in the provision of so-called soft facilities management such as 'hotel' services in hospitals, which also tended to be a focus for trade union opposition to proposed projects.

- Changes in HM Treasury policy in the context of a more benign environment for public finances meant that public finance became more readily available. This was reinforced by revised HM Treasury guidelines on value for money (VfM) in 2005.

- There were some spectacular failures, such as the termination of the contract during construction for the National Physical Laboratory (NPL) in 2004, the abandonment of the Paddington Health Campus PFI in 2005, and the bankruptcy of Metronet (one of the London Underground PPP suppliers) in 2007.

HM Treasury again reviewed its position in 2006 (HM Treasury 2006), now focusing more on operational issues, and reaffirmed its commitment to using private finance for the provision of public infrastructure where appropriate. Nonetheless, developments in the financial markets during 2007 and 2008 have greatly reinforced the downward trend. Private finance in the UK is usually provided in ratios of around 90% debt finance and 10% equity finance. Debt financiers charge the sum of interest at the reference rate, which represents general market risks plus loan margin; the latter represents project-specific risks. Debt on larger projects was typically sold as bonds, which were then rated by credit rating agencies. The purchase of credit insurance then made these bonds acceptable to long-term investors such as pension funds. In late 2007, confidence in the providers of credit insurance collapsed and made it difficult to sell bonds. The non-bond source of debt finance had been syndicated bank loans, with the banks often drawing the sums required from the wholesale money markets, but the collapse of Lehman Brothers in late 2008 led to a very difficult period for debt capital from banks.

These crises in the financial markets dried up the sources of debt that had enabled the UK boom in private finance, as loan margins doubled rendering many projects unaffordable. The NAO (2010b) has calculated that these increases in financing cost on the outstanding £13 billon pipeline of projects are raising annual charges by around 7% – this means, for instance, around £200,000 extra each year for a typical school project. Some 'shovel ready' projects were still allowed to go ahead despite increased financing costs during 2009 because of the economic stimulus that they would generate, but the number of projects agreed in 2009 was less than half that of 2006. In July 2010, the new administration cancelled all 'Building Schools for the Future' projects that had not already reached financial close, on value for money grounds. Similarly, 7 of the 18 municipal waste PFI projects that had not yet reached financial close were cancelled in October 2010.

ISSUES IN PRIVATE FINANCE: THE LESSONS FROM THE UK

The UK has built up considerable experience in the private finance of public infrastructure. It has seen a cycle from the depths of the recession in the early 1980s through the long boom starting in the early 1990s to the present return to recession. Many lessons have been learned, and the UK has actively promoted its expertise across the world. The aim of this section is to provide a review of some of the principal lessons. The account here will take a pragmatic position; the deeper issues around the private finance of public infrastructure are discussed in Chapter 2.

PROJECT PERFORMANCE

The NAO has reported twice on PFI performance in the construction sector (2003; 2009a). The summary data presented in Table 13.1 on the percentage of projects experiencing overruns come from an NAO-sponsored survey of PFI project teams; an earlier survey of government clients commissioned by HM Treasury provides the conventional data for 1998 and a survey of larger non-PFI projects by the NAO provides the conventional data for 2008. The NAO cautions against reading too much into these figures because there are differences in the project mix between the four surveys and weaknesses in the method of the earlier studies (Pollock et al. 2007). It also notes that none of the PFI projects experienced the kind of serious schedule and budget problems that it had reported on for conventional projects. The overall message here is that PFI does improve project performance, particularly as all the budget increases on the PFI projects in both surveys were due to changes initiated by the public sector. Respondents to those surveys agreed that a clear output specification was the key to good schedule and budget performance.

Table 13.1: PFI project performance

Performance criterion	Conventional 1998	PFI 2002	PFI 2008	Conventional 2008
Budget increase	73%	22%	35%	46%
Schedule overrun	70%	24%	31%	37%

Source: NAO 2003, 2009a.

This improvement in delivery performance has not generally been at the expense of quality of conformance to specification – the NAO reports general satisfaction in this respect. Even so, questions were raised regarding the quality of conception (design values) and specification (fitness for purpose) in some early PFI schools (Audit Commission 2003; Northern Ireland Audit Office 2004). As a result, the Commission for Architecture and the Built Environment developed guidance in 2002, and in 2007 was funded to provide designs reviews for SPV proposals under the BSF programme. NAO data (2009a) suggest that satisfaction with the design quality of facilities procured increased between 2002 and 2008.

INNOVATIVE FACILITIES

During the early phases of the advocacy of private finance it was suggested that this procurement route would stimulate innovation, particularly with respect to whole-life costs of the facility. There is little evidence, however, that this is indeed happening, although innovation rates do appear to be higher where the whole service including the core is outsourced, such as with DBFO roads and detention facilities (CIC 2000). A set of case studies of innovation in PFI hospitals (Barlow and Köberle-Gaiser 2008) supports this conclusion. Reasons for this include (NAO 2009b):

- lack of available data on whole-life costing that would allow informed decisions to be made on specifications to achieve better whole-life costs of the facility
- risk-averse financiers (banks and bond holders) perceive that innovation increases project risk on all three dimensions of budget, schedule, and quality
- lack of experience on the commissioning side within government and difficulties in writing the output specification
- separation between designers and users mediated through the SPV
- poor arrangements for learning from project to project
- de-scoping of the project to achieve affordability criteria.

These data, however inadequate, suggest private finance is not any more successful in stimulating innovation than public finance of infrastructure assets. This is an important conclusion, because innovation is one of the principal ways by which efficiency savings can be made that will offset the higher cost of capital to privately financed projects.

OPERATIONAL PERFORMANCE AND FLEXIBILITY

One of the principal differences between procurement of infrastructure though conventional public finance and through private finance is that the SPV retains operational responsibility for ensuring the delivery of the services provided by the asset for the life of the contract – often up to 30 years. Operational performance, complemented by the possibility of flexibility in the required performance to meet changing operational needs, is therefore essential.

For the local authority sector, 4ps (2005) examined the operational performance of 30 privately financed facilities and found general satisfaction with operational performance. Research by KPMG (2010) suggests that the patient environment and cleanliness of PFI hospitals on a standard self-assessed protocol are better than for conventionally procured ones of a similar age. A review of the operational performance of PFI hospital contracts by the NAO (2010a) concluded that operational performance is satisfactory – service levels are generally as agreed in the contract. Where there are problems, these are typically due to labour shortages in places such as London, which would also affect non-PFI hospitals. The NAO also found, however, that while performance was perceived to be a little better than in non-PFI hospitals, operational costs were no lower. Lower catering costs tended to be counterbalanced by higher maintenance costs that resulted from the higher standards written into the contract within the unitary charge. Market testing of 'hotel'

or 'soft facilities management (FM)' costs (catering, portering, and cleaning) every few years or so is typically allowed under the contract, but this rarely achieves savings. The NAO also notes that mechanisms to enable continuous improvement in maintenance costs were rare in the contracts.

These findings are important – although the achieved service levels are as expected, they are no cheaper than for non-PFI facilities. Where operational efficiencies can be achieved, they flow to the SPV rather than the public sector (NAO 2010a). Greater private sector efficiency is another potential source of savings to offset the higher cost of capital, yet it does not appear to be generally achieved. Moreover, the SPV has the incentive to protect the integrity of its asset so the public sector is locked in to relatively high hard FM costs and cannot make savings by cutting back maintenance levels. Many SPVs are currently refusing to renegotiate this aspect of their contracts during the current round of expenditure cuts in the health sector, putting even greater pressure on publicly funded areas of service delivery (*Financial Times* 2011a, 2011b).

Turning now to flexibility, one-third of the respondents to the 4ps (2005) research expressed concern about the future flexibility of the contract although they had generally found it possible to negotiate changes in the contract as requirements evolved. NAO research (2008b) shows that while there was general satisfaction with flexibility to make changes as requirements evolved, the public sector is typically paying over the market rate for those changes. In some cases it is not feasible to invite competitive tenders for the changes, but even where this is feasible, this was not often done. In addition to the cost of the actual works associated with the changes, SPVs were charging fees to manage the changes and amend the life-cycle cost model of the facility. The NAO was moved to describe some of these additional costs as 'not always justifiable'. The NAO analysis suggests that flexibility is more expensive under PFI than conventional procurement, and is, therefore, an additional cost that needs to be counterbalanced by benefits elsewhere.

TRANSACTION COSTS

Cost of capital is not the only additional cost incurred by private finance; transaction costs are also significantly increased: see Winch (2010) for a review of the theoretical issues. HM Treasury accepts that transaction costs will be higher on privately financed projects owing to the much greater rigour required in writing the output specification compared with an input one, and the much greater costs of tendering and associated contract negotiation. Indeed, the principal reason for excluding projects valued at under £20 million from PFI was their inability to support the transaction cost overhead.

Project promoter and bidder costs tend to disappear into overheads, but the extended length of the procurement period for privately financed projects suggests that these will be higher than for conventional procurement. NAO (2007) states that the average private finance contract took 34 months to close, roughly double the time for large conventional projects. It may be inferred that transaction costs were around double as well. Many public authorities underestimated the resources that would be needed in negotiations and overspent on their budgets for advisers; opportunity costs for internal staff were not costed in the research. So far as identifiable transaction costs are concerned, the NAO (2007) puts the figure for third-party advisers at an average of 2.6% of project costs for projects closed between 2004 and 2006. The heavy reliance on third-party advisers raises broader issues than transaction costs because, as Shaoul and her colleagues (2007) note, these advisers largely come from the 'big 4' accounting firms, which have a vested interest in the further development of the use of private finance and they often act as both advisers on and evaluators of the project development process, biasing the system towards private rather than public finance.

In principle, such costs are counterbalanced by the production cost savings, which suppliers are encouraged to share with clients through 'competitive tension' in the supply market, but growing difficulties have been experienced in maintaining competitive tension. NAO (2007) states that many projects received only two serious bids, and extensive negotiations have often taken place after the selection of the preferred bidder, leading to repricing in the absence of competitive tension. The problem here is that competitive tension is the principal mechanism for reducing 'opportunism' by suppliers. The evidence on flexibility discussed above suggests opportunism by some SPVs when making changes during operation; it is likely that final negotiations with preferred bidders also experience such opportunism.

VALUE FOR MONEY AND RISK TRANSFER

The cost of capital for a private sector enterprise is almost always greater than that for a sovereign government such as the UK. Ceteris paribus, an investment funded using private capital will cost more than one using public capital because it will have to cover higher capital charges. If the use of private capital is to be value for money, savings must be found elsewhere in the business case for the investment to offset the higher cost of capital. This is usually achieved through 'risk transfer' to the private sector. The analysis of value for money tends to be confounded with the issue of additionality – that is the availability of capital within the public sector budget for a particular project.

Value for money is achieved by comparing the bids received from the SPVs against a public sector comparator (PSC). If the offer by the SPV makes savings against the PSC, then the offer can be considered value for money and the private finance deal can go ahead. From where do the savings come to counteract the higher cost of capital raised by the SPV? They typically come from the transfer of risks to the SPV that under conventional procurement would have to be borne by the public sector client. Broadly, for any project risks lie in three areas.

1. The business case for the investment: the appropriate investment decision needs to be made – the problem of 'doing the right project'.

2. The execution of the project: the project phase of the infrastructure development needs to be managed effectively against the figures in the original business case – the problem of 'doing the project right'.

3. The facility through life: the infrastructure has to be maintained at an appropriate level of availability through its life and subsequently demolished or otherwise disposed of when that life comes to an end.

The first area of risk cannot be transferred. If the outturn balance of income stream against expenditure stream in the investment appraisal is fundamentally flawed, then the public sector will have to provide additional funds to maintain facility availability, regardless of the detail of the contract, or it will face the default of the SPV and loss of facility availability. A significant proportion of early private finance projects ran into problems due to poorly structured deals that caused the public sector to incur significant additional costs and loss of services to the public (CPA 2003). It is argued, however, that the greater due diligence inherent in the process of negotiating a privately financed deal does reduce the risk of poor investment appraisal (Flyvbjerg et al. 2003). In practice, this risk has been reduced in the UK by removing the projects where the risks of poor investment appraisal are greatest – information systems – from the private finance programme. There does not appear to be any comparative data on the quality of investment appraisal for publicly and privately financed infrastructure investments.

The second area is central to risk transfer. Under public finance, the public sector client makes monthly interim payments to the contractor for the facility during project execution while receiving no benefits from its use until handover. Under private finance, no payment is made until the facility is available for use and the costs of project execution are bundled in the unitary charge. As indicated in Table 13.1, the project execution risks appear to have been effectively transferred to the private sector for infrastructure delivery; nonetheless, in the rare case of spectacular delivery failure such as at the NPL, then the public sector again has to step in at considerable additional expense.

The third area covers the risks associated with the facility through life. Here, the private sector is taking little risk except for latent defects in the original design because the FM contracts are typically open for periodic renegotiation. Should user requirements – and hence the original business case – change, however, then private finance costs are higher. The risks associated with changes to requirements are therefore higher for the public sector under private finance, yet these are not deducted from the public sector comparator. The treatment of residual value of the asset at the end of the contract is also important and is highly sensitive to the discount rate used (Heald 2003).

ADDITIONALITY

Like all organisations, the public sector has a finite limit to its ability to raise finance and hence invest. This is typically set as a limit on the public sector net debt (PSND) as a proportion of overall economic activity. Policy may loosen or tighten this constraint but it is always there. In order to maximise investment in infrastructure that provides socially useful public services it is tempting to find ways around the limit, and private finance can offer one option. Here the accounting treatment discussed below is vital – if the investment in the new asset can be treated as being 'off balance sheet' then the investment made does not count towards the PSND and so is not subject to the policy constraint. An alternative, of course, would be to relax the constraint, but this option is beyond the scope of this analysis and we will assume here that the PSND constraint is appropriate.

In the two phases up to 1999, the PSND set a tight constraint on public sector investment, and it can be argued that private finance provided significant – around 10% – additionality to public finance. Even if an investment could be made from public funds, the use of private finance releases public funds for use on other projects that cannot be structured to attract private finance. For instance, 11 DBFO roads, significant extensions to the Docklands Light Railway, and 20 hospital projects were signed prior to 2000. It is likely that only a few of these would have gone ahead without private finance. HM Treasury relaxed the PSND constraint in 2000, and insisted that, henceforth, value for money was the only criterion for investment appraisal, yet much departmental guidance on PFI continued to stress the advantages of private finance for reasons other than value for money, and the incentive to keep liabilities out of PSND remained despite the implementation of IFRS (NAO 2009b). Severe constraints on PSND have now returned.

Thus, the impression still lingered in the public sector for some years that private finance was the only option available for projects. This led to significant distortions of the investment appraisal process (NAO 2009b) such as the following.

- Budgetary processes can make private finance appear more affordable even though the cash flows are identical.

- There is a transfer of risks, such as demand side risks, which are not within the ability of the SPV to manage, yet this ensures that the facility is off balance sheet under generally accepted accounting practice (GAAP).

- Contract provisions that would increase flexibility and market testing of lifecycle costs are minimised because again this would not transfer risk to the SPV under GAAP.

THE WORKING CONDITIONS OF STAFF

Continuing concern has been expressed by the UK's principal trade union for public sector employees, UNISON. The issue arises because staff previously employed by the public sector – most frequently in the soft FM 'hotel' services – are typically transferred to the SPV in many, but certainly not all, private finance projects. Particularly for lower-paid workers, employment terms and conditions are often superior to those in the private sector. Such transfers are, however, covered by European Union employment legislation – the Transfer of Undertaking (Protection of Employment) (TUPE) regulations – which provide protection for such employees.

Of more concern are those people hired following the transfer who are not protected, and pensions, which are not covered by TUPE. Newly hired employees with some of the early SPVs did appear to have been disadvantaged. In a series of policy steps between 2001 and 2005, the government moved to the position that newly hired SPV employees should be offered broadly comparable terms and conditions, including pensions, to those who were transferred. In practice, many newly hired employees, particularly in the hard FM areas, are better paid than those transferred (NAO 2008a) reflecting labour market conditions.

OVERVIEW

From this review, we can conclude that the reduced risk of additional costs on average associated with project execution and improved business case need to outweigh the additional costs of PFI that arise on average from the cost of capital, transaction costs, and flexibility. So far as we are aware, no data are available which would allow a calculation of this balance sheet to be made (c.f. CPA 2011). It may be tentatively concluded from this analysis that the general case for private finance is not proven; the benefits gained from additionality, risk transfer and improved decision making are too nebulous to allow certainty that they are outweighing the known additional costs indicated by the minus signs in the same table.

It can also be argued, as can be seen from Table 13.1, that the performance of publicly financed projects has improved significantly over the last 10 years (NAO 2001, 2005) thanks to innovative arrangements such as NHS Procure 21+. This is hardly surprising because, almost simultaneously with the launch of PFI, the Conservative government started a programme of 'conventional' procurement reform that was sustained by the Labour government (Winch 2000) and symbolised by the establishment of the Office of Government Commerce (OGC) in 2000. The OGC was absorbed into HM Treasury in 2010 but continues to function as a change agent for government procurement. Although it has an advisory role rather than a mandatory authority, it does appear to have made real progress in strengthening the ability of the UK public sector to procure infrastructure (NAO 2004) even if much more remains to be done (NAO 2009c).

Arguably, even if advantages of private finance arising from the quality of the business case come from the much greater due diligence in the project insisted upon by the banks, there is no apparent reason why the public sector cannot achieve similar gains. It is perfectly possible to transfer project execution risks to the supplier under traditional procurement, so long as the client is capable of overseeing the project. Even if we accept that there are benefits here, they come at a high transaction cost and it is not clear why the public sector client cannot improve its own internal decision-making process to mitigate the risk of a poor business case.

ACCOUNTING TREATMENT OF PRIVATE FINANCE

The basic accounting regime for private finance within public sector investment at the start of our period of review was established by the so-called Ryrie rules of 1981, which stated that:

- a value-for-money (VfM) test should demonstrate that the private finance was more cost-effective than public finance through comparison with the public-sector alternative
- privately financed projects should count against the PSND.

The problems with these rules were that restrictions on PSND levels meant that projects could not be funded, yet the theoretical public sector alternative came out cheaper in the VfM test owing to the lower cost of capital obtainable by the public sector. The first rule was relaxed in 1989 to allow a comparison with doing nothing, which had the effect of enhancing the benefits side of the equation, and an allowance for the value of risk transfer, which made bolstering the forecast cost of the public sector option much easier. The second was relaxed with the launch of PFI in 1992, which started the active promotion of private finance by the UK government.

Nonetheless, the problem that the Ryrie rules had attempted to tackle in 1981 remained. Recommendations from the Accounting Standards Board (ASB) published in September 1998 raised serious questions about the viability of private finance deals. The issues revolved around what was actually being provided: an asset, a service, or a combination of the two, and the allocation of the risks associated with the investment. Traditionally, the state has procured assets and then delivered services, such as custody, health, and transport, by exploiting those assets themselves. The key to the broader growth of private finance was the argument that the government was procuring a service, not the asset that enabled that service provision.

New accounting rules for PFI projects were published in response to the ASB concerns. These rules turned on two tests of where risks lay in the contract:

- whether the asset was separable from the service provided; if it were, then the asset need not be taken into the public sector's accounts as an asset

- if not separable, whether the 'demand risk' lay with the SPV; it lay with the public sector if fluctuations in the use of the facility were in any way compensated by paying for unused parts of the facility, or favouring the use of the privately financed asset as part of the total portfolio of assets operated by the public sector.

This generally agreed accounting practice (GAAP) supported the rapid expansion of private finance during the 2000s, but the UK government adopted the International Financial Reporting Standards (IFRS) in 2009. This adopts a control test, rather than a risk test, for inclusion of an asset on the public balance sheet (NAO 2009b), in circumstances where the public authority:

- exercises effective control over the services provided by the privately financed asset in terms of to whom it must provide them and their price, and

- controls the residual price of the asset at contract end through, for instance, an option to purchase at previously agreed price.

At first sight, these new standards would appear to render the fiscal attractiveness of most private finance, other than tolled concessions, to be of little value (McQuaid and Scherrer 2010). Accounting treatment is not, however, the same as statistical treatment (NAO 2009b). The UK Office of National Statistics uses the European System of Accounts (ESA 95) to prepare the UK national accounts, which adopt the type of risk-based assessment used by GAAP and, in 2009, HM Treasury announced that government departments would follow ESA 95, and not IFRS in departmental budgeting. The effect of this decision is that the accounting and statistical treatments of assets have moved apart – having been consistent under GAAP – and that many privately financed infrastructure assets will still not appear in calculations of PSND.

CONCLUSIONS

The use of private finance to create public infrastructure assets has been a remarkable policy experiment over the last 30 years. The first phase saw a radical shift from the traditional privatisation/nationalisation dynamic in UK infrastructure. While energy, telecommunications and water infrastructure were simply privatised, transport infrastructure presented greater challenges and private finance became an attractive way of providing the types of infrastructure that were traditionally tolled in any case, such as estuarine crossings.

The success of these early projects prepared the basis for PFI in 1992. The apparent benefits of additionality during a period of tight restraint on PSND encouraged project promoters to put forward a wide variety of different types of infrastructure project, some of which were more appropriate for private finance than others. This period saw some significant successes, many projects with mixed results and some spectacular failures, such as many of the information systems infrastructure projects.

The incoming Labour government of 1997 quickly assuaged the doubts about private finance it had expressed in opposition and moved to learn from the experimental projects. It began the process of tightening up on a number of areas of practice ranging from the standardisation of contracts to clarifying the employment terms and conditions of transferred workers. In 2000 it relaxed the PSND constraint and oversaw a remarkable expansion of private finance of public infrastructure. Many of the problems that challenged the second, experimental, phase projects were addressed and new forms of private finance arrangements were developed. While value for money was the official policy, project promoters continually expressed concerns that they were being pushed into privately financed procurement for additionality reasons.

The flow of deals peaked in 2006 and then started to fall away rapidly from 2008 on. As more and more projects moved into the operational phases, it became clear that a high proportion of facilities were delivering on the expectations of their users, but that few additional benefits were being achieved. Difficulties in raising finance started to become apparent, and the private sector's appetite for new projects apparently became sated. The number of privately financeable projects dropped as value-for-money criteria became tighter – a trend that was reinforced with the adoption of IFRS in 2009.

Thus by late 2010, the private finance of public infrastructure was moribund in the UK. If capital market conditions improve, we may see the revival of some projects, but the value-for-money issues that have been the focus of so much criticism have not really been resolved. The use of additionality in a very tight period for government spending might be attractive, but is constrained by the adoption of IFRS. The most viable candidates for private finance remain those that dominated phase one, tolled infrastructure, but a country such as the UK with mature infrastructure offers relatively few opportunities for that kind of investment. Where investment is still need in areas such as urban transit, private finance is difficult to justify, and where it is needed in areas such as education and health affordability criteria will set a low cap on activity.

In sum, a number of conclusions may be drawn from the UK experience with private finance over 30 years.

Private finance can deliver considerable benefits for the provision of public infrastructure in appropriate conditions but it can be difficult to establish with confidence any value for money in the investment appraisal.

Making private finance the only option for public procurement can lead to rampant strategic misrepresentation and, hence, the private funding of inappropriate projects with inevitable consequences later

on. Private finance can only ever be one of a number of procurement options for public infrastructure.

Accountability is essential for the improvement in policy. The role of the NAO's careful research since 1997 – far and away the largest source of data on privately financed projects anywhere in the world – has been central to the development of the policy. Mediated through the House of Commons Committee of Public Accounts, these data have continually pushed HM Treasury to develop its policy regarding private finance.

The commercial skills on the public sector side have remained weaker than required throughout the period. Although much has been learned since the experimental phase 1992–9, there still remain significant weaknesses in the public sector client's ability to define what it wants and to negotiate effectively with the private sector to achieve it (NAO 2009c).

The Conservative Liberal coalition is currently seeking alternative models of infrastructure finance to those used over the last 30 years. These include a Green Investment Bank to use public funds in a focused way to stimulate private investment in green infrastructure; tax increment financing (TIF), which allows public authorities to borrow against future receipts from increased taxes on the economic activity stimulated by the investment of the borrowed funds in infrastructure; and, in a nice reversal of the principle behind PFI, the possible finance and construction of infrastructure by the public sector with a view to leasing it to the private sector, as with High Speed 2. Within the UK's devolved governments, Scotland has been particularly innovative. In 2008, it set up the Scottish Futures Trust, which mobilises a variety of private finance routes, such as a non-profit distributing model and TIF, as well as developing public finance routes. These projects are then carried out through a nationwide framework agreement called 'hub'. The provision of infrastructure in an advanced economy constrained in its ability to borrow to finance all viable infrastructure projects is a pervasive problem. The UK's remarkable experiment with the role of private finance in such provision has been bold; lessons have been learned and new avenues are currently being explored.

REFERENCES

4ps (2005), *4ps Review of Operational PFI and PPP Projects* (London).

Audit Commission (2003), *PFI in Schools* (London).

Barlow, J. and Köberle-Gaiser, M. (2008), 'The Private Finance Initiative, Project Form and Design Innovation: The UK's Hospitals Programme', *Research Policy*, 37: 1392–1402.

CPA (Committee of Public Accounts) (2003), *Delivering Better Value for Money from the Private Finance Initiative* (HC 764) (London: House of Commons).

—— (2011), *PFI in Housing and Hospitals* (HC 631) (London: House of Commons).

CIC (Construction Industry Council) (2000), *The Role of Cost Saving and Innovation in PFI Projects* (London: CIC).

Flybjerg, B., Bruzelius, N. and Rothengatter, W. (2003), *Megaprojects and Risk: An Anatomy of Ambition* (Cambridge: Cambridge University Press).

Financial Times (2011a), 1 February.

Financial Times (2011b), 17 February.

Heald, D. (2003), 'Value for Money Tests and Accounting Treatment in PFI Schemes', *Accounting, Auditing & Accountability Journal*, 16: 342–71.

HM Treasury (2003), PFI: *Meeting the Investment Challenge* (Norwich: HMSO).

—— (2006) *PFI: Strengthening Long-term Partnerships* (Norwich: HMSO).

KPMG International (2010), *Operating Infrastructure Healthcare Infrastructure: Analysing the Evidence* (London).

Marcou, G. (1992), 'Le Régime Juridique', in G. Marcou, R. Vickerman and Y. Luchaire (eds.), *Le Tunnel sous la Manche* (Lille : Presses Universitaires de Lille).

McQuaid, R.W. and Scherrer, W. (2010), 'Changing Reasons for Public-private Partnerships (PPPs)', *Public Money and Management*, 30: 27–34.

NAO (National Audit Office) (2001), *Modernising Construction* (London).

—— (2003), *PFI: Construction Performance* (London).

—— (2004), *Improving Procurement London* (London).

—— (2005), *Improving Public Services through Better Construction* (London).

—— (2007) *Improving the PFI Tendering Process* (London).

—— (2008a), *Protecting Staff in PPP/PFI Deals* (London).

—— (2008b), *Making Changes in Operational PFI Projects* (London).

—— (2009a), *Performance of PFI Construction* (London).

—— (2009b), *Private Finance Projects* (London).

—— (2009c), *Commercial Skills for Complex Government Projects* (London).

—— (2010a), *The Performance and Management of Hospital PFI Contracts* (London).

—— (2010b), *Financing PFI Projects in the Credit Crisis and the Treasury's Response* (London).

Northern Ireland Audit Office (2004), *Building for the Future: A Review of the PFI Education Pathfinder Projects* (Norwich: TSO).

Pollock, A. M., Price, D. and Player, S. (2007), 'An Examination of the UK Treasury's Evidence Base for Cost and Time Overrun Data in the UK Value-for-Money Policy and Appraisal', *Public Money and Management*, 27: 127–34.

Shaoul, J., Stafford, A. and Stapleton, P. (2007), 'Partnerships and the Role of Financial Advisors: Private Control over Public Policy', *Policy and Politics*, 35: 479–95.

Winch, G. M. (2000), 'Institutional Reform in British Construction: Partnering and Private Finance', *Building Research and Information*, 28: 141–55.

—— (2010), *Managing Construction Projects: An Information Processing Approach* (2nd ed.) (Oxford: Wiley-Blackwell).

RR/126/001

ISBN: 978-1-85908-475-5