



Consultant's Report

Project Number: 49166-001

People's Republic of China TA 8940: Municipality-Level Public–Private Partnership (PPP) Operational Framework for Chongqing

PPP Value for Money Guidance Note

Prepared by
Castalia Strategic Advisors
Sydney, Australia

For the Chongqing Finance Bureau

This consultant's report does not necessarily reflect the views of ADB or the Government concerned, and ADB and the Government cannot be held liable for its contents.

Asian Development Bank



PPP Value for Money: Guidance Note

Report to the Asia Development Bank

**February
2016**

Acronyms and Abbreviations

ADB	Asian Development Bank
EPC	Engineering, Procurement and Construction
EOI	Expression of Interest
KPI	Key Performance Indicator
NSW	New South Wales
O&M	Operation and Maintenance
PRC	People's Republic of China
PIE	Public Interest Evaluation
PSC	Public Sector Comparator
PPP	Public-Private Partnership
RFP	Request for Proposal
VfM	Value for Money

Table of Contents

1	Introduction	4
2	What is value for money	5
2.1	VfM is achieved by harnessing private sector incentives for performance	5
2.2	VfM is the gain from PPP procurement compared to the next best alternative	6
2.3	VfM should be the key reason for exploring PPP procurement; “fiscal space” is a wrong reason for using PPPs	6
3	Securing VfM throughout the PPP cycle	9
3.1	Securing VfM during project selection	10
3.2	Securing VfM during project development and tendering	12
3.2.1	The public sector comparator	12
3.2.2	Other quantitative VfM analysis methods	14
3.2.3	Qualitative analysis of project objectives	15
3.3	Securing VfM during project implementation	17
3.4	Securing VfM following contract completion	18
4	Conclusion: Key VfM principles	19

Tables

Table 3.1: PPP Approval Process and Evidence in NSW, Australia	10
Table 3.2: Will a PPP deliver value for money?	11

Figures

Figure 3.1: Government expenditure under traditional procurement and an availability-payment PPP	13
---	-----------

1 Introduction

The People's Republic of China (PRC) is actively encouraging private investment in infrastructure, and a major part of this is building up a Public-Private Partnership (PPP) program at both the national and provincial levels. In line with this, the Asian Development Bank (ADB) is supporting the municipality of Chongqing to develop its own PPP program. The ADB has since hired Castalia to help develop an operational framework to guide Chongqing in this process. This framework includes guidance on how governments can ensure that their PPP program delivers value for money (VfM) to the government.

Countries with successful PPP programs recognise that VfM is the key reason for using PPPs. Their PPP policies and procedures are designed to secure VfM at every step in the PPP process. For example, an OECD study found that 19 of 20 surveyed countries apply some kind of VfM assessment to proposed PPPs.¹ However, international best practice for securing VfM is still evolving, and is often the subject of controversy and debate.

This report is organised into two chapters. The first chapter discusses the broad policies and principles for securing VfM. The second chapter considers the implications of these principles for Chongqing.

The first chapter of the report is informed by the international experience with securing VfM (particularly in Australia and the UK). It uses this experience to provide guidance on how Chongqing can use PPPs to deliver better VfM than alternative procurement methods. It first introduces the concept of VfM and explains why VfM is the key reason for using PPPs (Section 2). It then discusses how governments can secure VfM at each stage of the PPP cycle—from project selection through to project implementation and ex-post project assessments (Section 3). Finally, the report concludes with the key principles Chongqing should follow to ensure their PPP program delivers VfM (Section 4).

¹ Burger and Hawkesworth, (2011), “How to Attain Value for Money: Comparing PPP and Traditional Infrastructure Public Procurement”, *OECD Journal on Budgeting*, Vol. 2011/1

2 What is value for money

2.1 VfM is achieved by harnessing private sector incentives for performance

The mechanisms by which PPPs can help improve infrastructure delivery compared to other forms of procurement are often summarized as ‘value drivers’. Together, these value drivers can achieve value for money for the government. The most common value drivers include:

- **Risk transfer**—risk retained by the Government in owning and operating infrastructure typically carries substantial, and often, unvalued cost. Allocating and transferring these risks to the private party incentivises them to manage such risks. If the private party is better able to manage these risks at a lower cost this can reduce the project’s overall cost to government
- **Whole-of-life costing**—placing responsibility for design, construction, ongoing service delivery, operation as well as maintenance and refurbishment with one party incentivises that party to complete each project function (design, build, operate, maintain) in a way that minimizes total costs. For example, they may invest in more expensive but efficient construction techniques if this leads to lower O&M costs
- **Integration**—on top of the benefits of whole-of-life costs minimisation, there is often value in having one party think through how to provide all components of the project. For example, an integrated private provider may be more innovative or better able to apply existing technologies than a provider focused on only one component of the project
- **Budget certainty and service predictability**—a PPP requires an upfront commitment to the whole-of-life cost of providing the asset over its lifetime, building in appropriate maintenance. This both provides the government with budgetary predictability over the life of the infrastructure asset, and reduces the risks of funds not being made available for maintenance after the project is constructed
- **Focus on service delivery**—allows a sponsoring department or agency to enter into a long-term contract for services to be delivered when and as required. Management in the PPP firm is then focused on the service to be delivered without having to consider other objectives or constraints typical in the public sector
- **Innovation**—specifying outputs in a contract, rather than prescribing inputs, provides wider opportunity for innovation. Competitive procurement of these contracts incentivises bidders to develop innovative solutions for meeting these specifications
- **Asset utilization**—private parties are motivated to use a single facility to support multiple revenue streams, reducing the cost of any particular service from the facility. Further, where the private party receives user fees, they are incentivised to maximise the use of the asset. For example, a bus operator is incentivised to provide a quality service to encourage patronage and increase their revenue
- **Accountability**—government payments are conditional on the private party providing the specified outputs at the agreed quality, quantity, and timeframe.

If performance requirements are not met, service payments to the private sector party may be abated. This incentivises the private party to meet their obligations.

2.2 VfM is the gain from PPP procurement compared to the next best alternative

In order to truly know if PPP procurement provides VfM, it needs to be compared to the next best alternative. This alternative could be any other form of procurement. Comparing PPP procurement to a poor alternative will overstate VfM. As such, an appraisal approach which enables decision makers to compare multiple procurement approaches is most likely to lead to sound decision-making.

The best alternative could be quite complicated; it could involve a series of outsourcing contracts that transfer risk to the private sector in a similar way as a PPP contract. For example, the risk of construction cost overruns can often be managed with competitive Engineering, Procurement and Construction (EPC) contracts, not only with PPPs.

In some cases, there may not even be an alternative to PPP procurement. For example, if whole-of-life cost minimisation is a key objective of the government, PPP procurement may be the only way to achieve this objective.

Many countries fail to think through the best alternative procurement method during VfM analysis. Normally, the alternative procurement method is an amorphous, ill-defined version of centralised public procurement.

For example, an audit of the UK VfM analysis found that “while the model compared PPP to ‘conventional procurement’, it did not enable the comparison of other contracting approaches with PPP”.² The audit also found conventional procurement was ill-defined, and that in some cases, the conventional procurement option was in fact undeliverable. Owing partly to these failings, the UK Treasury is now considering whether and how VfM analysis could be applied to a broader set of procurement options.

Some countries have already begun to recognise the importance of well-defined, viable comparisons to PPP procurement. For example, in Virginia, USA, road PPPs are assessed against a range of possible procurement options, including pure tolled concessions, different levels of availability payments, or design-build-finance models.

2.3 VfM should be the key reason for exploring PPP procurement; “fiscal space” is a wrong reason for using PPPs

The key reason for using a PPP is that, for suitable projects, a PPP can deliver superior VfM for government than any alternative delivery model. This is achieved by harnessing private sector incentives for performance as described above.

Countries with advanced PPP programs understand this and focus their PPP selection, development, tendering and implementation efforts around achieving VfM. For example, the Partnerships Victoria’s Practitioner’s Guide—for PPP practitioners in the state of Victoria in Australia—clearly establishes VfM and public interest as the basis for the PPP program.

² National Audit Office, (2013), “Review of the VfM assessment process for PFI”, Briefing for the House of Commons Treasury Select Committee

Yet many governments turn to PPPs because of the perception that PPPs create “fiscal space” to enable accelerated implementation of infrastructure projects. But PPPs are not a substitute for government borrowing. In general, they make little difference to the funding required to pay for the infrastructure. That is, the full cost of the project is ultimately paid by government or users; over the long term no additional funding or fiscal space is created by PPP procurement and private finance.³ Only the nature of government expenditure changes: with upfront capital expenditure often replaced by the recurrent cost of meeting availability payments.

Depending on how PPP commitments are treated in fiscal reports and accounts, PPP procurement may create “space” in the short term—for example in the face of deficit or debt targets—and hence an impetus to implement projects as PPPs, irrespective of whether doing so will create better VfM. This effect can be exacerbated where PPPs involve transfers from one level of government to another.

Governments can implement policies to limit this impetus. For example, in Australia, VfM is ensured through the application of a “budget rule”. The budget rule ensures that the “investment decision” always precedes the “procurement decision”, as described in more detail in Box 2.1. The investment decision assesses whether the project’s objectives will likely result in net economic benefits, regardless of the procurement method. By adhering to the budget rule, the government dispels the common misconception that PPPs are an alternative to government borrowing. That is, PPPs are not used as a means of extending the government’s budget constraint. While private finance may be used to initially construct the infrastructure, it will ultimately be funded by government or users through ongoing payments over the life of the contract.

The procurement decision, on the other hand, is an assessment of which delivery method will more likely ensure that the project objectives will actually be achieved. While this is the basis of VfM, it only makes sense if the project is worth investing in in the first place. Thus, delivering a project as a PPP is always a procurement decision, and only once the investment decision has been made.

Box 2.1: The budget rule in Australia

A number of states in Australia adopt a “budget rule”. The budget rule separates the investment and procurement decisions, in accordance with the following:

- Investment Decision (is the project worth pursuing?)
 - Cost benefit analysis / Business case
 - Prioritisation.
- Procurement Decision (what procurement method yields the greatest VfM?)
 - Value for money
 - Public interest.

Following the decision to invest—but preceding the procurement decision—the project is budgeted for by way of capital expenditure in an agency’s forward capital budget. This ensures that:

³ Charging users for services can sometime be done better or more easily with private operation than in the public sector.

- All potential projects (regardless of procurement method) compete for the same finite funds, thus ensuring that projects are appropriately prioritised in terms of strategic importance
- The choice of procurement method is not prejudiced by the perceived budget impact

It also ensures that, if PPP procurement is not assessed as providing VfM, the investment can still proceed using a different procurement methodology.

If PPP procurement is found to deliver the best VfM, an agency's original forward capital budget for the project, which assumes traditional procurement, is converted into PPP capital payments. This conversion requires a capital amortisation profile to be sculpted, with funding to cover the capital component of the payments dispersed to the agency over the life of project.

3 Securing VfM throughout the PPP cycle

The PRC Ministry of Finance (MOF) recently issued VfM assessment guidelines. These guidelines require government agencies to carry out a qualitative VfM assessment during the PPP project identification and preparation phase. Under the assessment methodology, potential PPP projects are evaluated against six basic criteria: life cycle integration degree, risk identification and allocation, performance oriented and innovation encouragement, potential competition level, the government agency's ability, and bankability. The assessment is pass/fail. The guidelines also encourage quantitative analysis, but this is not a requirement.

This is a reasonable start in developing a VfM framework for the PRC and its provinces, for project screening purposes. The MOF guidelines ensure that projects pass the standard selection criteria for PPPs. Section 3.1 elaborates on these criteria.

However, it our view that VfM should not be assessed at only one point in time. As will be discussed in this section, opportunities to improve VfM arise throughout the entire procurement cycle—from initial selection of the project through to implementation. Further, projects should proceed through a continuous and comprehensive set of checks and balances to ensure that only projects that provide VfM are procured. VfM analysis should be constantly updated over this time. Finally, governments should also conduct ex-post evaluations to determine whether VfM was achieved and to inform future procurement.

As the project is developed, public officials will face a trade-off between availability and accuracy of information, and impact of the analysis. That is, while information is more limited in the early stages of project development, analysis can have more impact, such as leading to the decision for a PPP project to be withdrawn. In contrast, in the later stages of project development, information may be more detailed, but it is generally harder to “change route”. As such governments tend to iterate their analysis: typically with qualitative analysis taking place earlier in the process, while quantitative analysis comes later.

For example, in Australia, substantial attention is paid to VfM throughout the procurement process. Table 3.1 describes the approval process for PPP projects in New South Wales (NSW), a state in Australia. This is typical of processes in other jurisdictions; differences, if any, are not material.

In NSW, the state Cabinet approves the project six times, at key decision points in the process, to ensure that only projects that provide VfM make it to the tendering stage. Poor projects are cut early, before significant effort is expended. At each of the approval points, decision makers are presented with relevant evidence to continuously confirm that procuring the project as a PPP offers VfM.

Table 3.1: PPP Approval Process and Evidence in NSW, Australia

Stage	Decision/approval	Evidence
Project selection		
Investment decision	Budget funding approval	Business case, including a cost-benefit analysis
Procurement decision	Approval to procure as a PPP	Preliminary Public Sector Comparator (PSC)* and Public Interest Evaluation (PIE)**
Project development and tendering		
Project development	Approval to invite Expression Of Interests (EOIs)	Updated business case, PSC, and PIE
EOI	Approval to issue Request For Proposal (RFP)	Updated PIE
RFP	Approval of preferred bidder	Updated risk allocation and PIE
Negotiation and contract finalisation	Approval for contract execution	
Project implementation		
Management and monitoring	N/A	Performance is measured against Key Performance Indicators (KPIs)
Project termination		
Ex-post evaluation	N/A	Project outcomes are compared to forecasts made during project development

* The Public Sector Comparator (PSC) is an estimate of the cost that the government would pay were it to deliver an infrastructure project by itself. It is discussed in detail in Section 3.2.1.

** The Public Interest Evaluation (PIE) is conducted to ensure that the project will not adversely impact the public. The PIE takes a broader view of VfM than the PSC—the PIE criteria focus on project outcomes by considering the value to users and taxpayers. For example, the criteria include community consultation, consumer rights, accountability and transparency, and public access.

Source: NSW Treasury, (2012), “NSW Public Private Partnership Guidelines”

3.1 Securing VfM during project selection

Securing VfM during project selection is about deciding which method of procurement will deliver the greatest VfM.

During the project selection stage, the decision to procure a project involves comparing a project’s costs and benefits. If benefits exceed costs (to a certain degree), the project is deemed worth pursuing. This is the “investment decision”.

Once the government decides that a project is worth procuring, it then decides *how* to procure the project. This “procurement decision” involves deciding which method of procurement is most likely to deliver VfM. This need not necessarily be the lowest cost

option, but rather some combination of costs and benefits that best realise the project's objectives.

For example, the government may be deciding how to procure a public transport project. The government's objective for this project is reduced traffic congestion. This objective will only be achieved if commuters realise the key benefit of reduced travel time. The procurement method that delivers the greatest reduction in travel time for the greatest number of commuters will best deliver the project objective. There is no VfM if the public transport PPP delivers a lower cost alternative to conventional procurement but does not ease traffic congestion. As such, the VfM analysis should be focused on determining which method of procurement will best lead to lower traffic congestion.

During project selection, VfM analysis typically involves determining whether the project exhibits certain characteristics that suggest PPP procurement will deliver the best VfM. These characteristics are set out in Table 3.2.

Table 3.2: Will a PPP deliver value for money?

Yes, if ...	No, if ...
it involves infrastructure and services which are likely to be required for the duration of the contract	the project involves the development of infrastructure which is constantly changing, such as information technology and telecommunications projects, or defence projects involving weapon systems
the infrastructure and services are unlikely to change significantly during the term of the contract, or any changes can be predicted and priced up front	the project outcomes government desires are not sufficiently certain to enable the private sector to devise and price an infrastructure and service solution
the project involves risks which cannot be transferred to the private sector under alternative delivery models (eg. demand risk), but which the private sector is prepared to take at a price lower than it would cost government to manage the risk itself	the project involves many significant risks which are most efficiently managed collectively (ie. by government embracing and sharing the risks with the designer, the constructor and the operator/maintainer), rather than by allocating them to a particular party
the project is complex or unique, and therefore likely to benefit from the additional due diligence which private sector financiers will perform	the government wants a high degree of control over service delivery
the project is of sufficient size (eg. the capital cost exceeds PHP1 billion) to justify the transaction costs associated with a PPP	the project involves public interest issues best managed by traditional procurement approaches which give government greater control

Source: Improving the Outcomes of Public Private Partnerships, Clayton Utz, 2013

3.2 Securing VfM during project development and tendering

Securing VfM during project development and tendering is about effective risk allocation.

Project development and tendering is the stage where the most in-depth VfM analysis occurs. In most countries, VfM analysis involves generating a public sector comparator (PSC)—an estimate of the cost that the government would pay were it to deliver an infrastructure project by itself. The PSC is then compared to the cost of the private sector bids submitted during tendering. The PSC is an analytical tool used to determine whether the allocation of certain risks to the private sector can reduce the cost of a project relative to public procurement. The PSC is discussed in Section 3.2.1.

Despite being a lengthy and complex analytical exercise, the PSC process has widely-recognised methodological limitations. As such, many countries use other quantitative analysis methodologies for comparing costs between PPP and conventional procurement. Two of these such methodologies—reference class forecasting and shadow bid models—are discussed in Section 3.2.2.

However, these quantitative methodologies, as well as the PSC, still have one key limitation—they narrowly focus on cost. In contrast, VfM is about achieving project objectives. It is the combination of costs *and* benefits that best realise the project's objectives. In response to this limitation, this report recommends that governments also undertake qualitative VfM analysis focused on project objectives, as discussed in Section 3.2.3.

3.2.1 The public sector comparator

In most countries, VfM analysis guidance is built around the comparison of bid costs to the PSC. In order to provide a meaningful test for VfM against the private bids the PSC must account for the risks that would be transferred to the private party under a PPP model. Current practice is to build into the PSC the cost of bearing these risks.

The PSC methodology

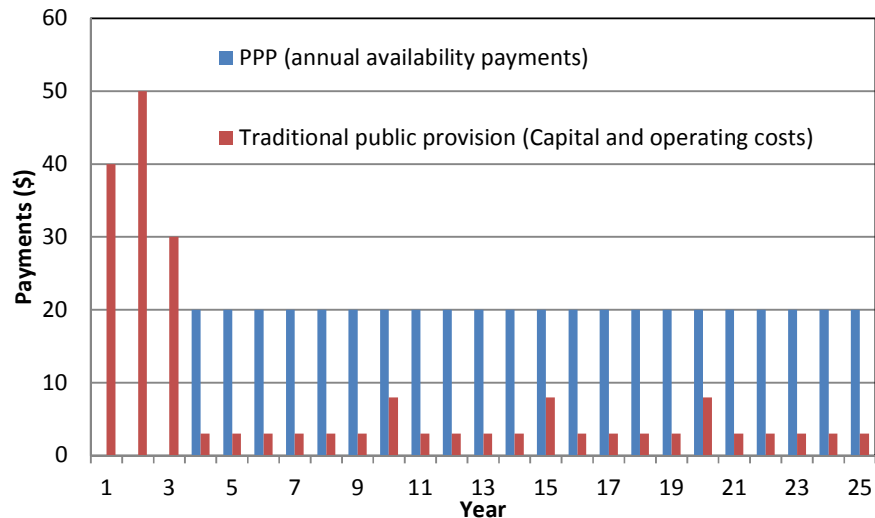
The starting point for the PSC is typically the best estimate of the capital cost and lifetime operations and maintenance cost of implementing the project under public procurement. This value is adjusted, to enable a fair comparison between the PSC and the PPP. While the exact methodology differs between countries most countries apply two types of adjustments:

- Risk adjustments—one of the main differences between traditional procurement and the PPP approach is that the PPP transfers more risks to the private party. The return on investment expected by the private party will take into account these transferred risks. This means that to make a fair comparison, the PSC should also take into account the cost of these risks
- “Competitive neutrality” adjustments—a public sector project or enterprise may have cost advantages or disadvantages compared to private company, which create costs or benefits to the government that are not normally taken into account when considering the cost of a traditionally procured project. For example, the tax liabilities under the two options may be different. These differences should be corrected for in calculating the PSC.

There are also differences in the timing of payments between the PPP option, where payments are often spread over time, and traditional procurement, where the government must meet construction costs upfront (Figure 3.1).

The two streams of payments are usually converted into net present values, to give a single value for comparison. This requires defining the appropriate discount rate to apply to future cash flows in both the PPP and PSC models.

Figure 3.1: Government expenditure under traditional procurement and an availability-payment PPP



Limitations of the PSC methodology

However, the PSC process has widely-recognised methodological limitations, including:

- **Subjectivity.** Like many financial models, the PSC is based on simplifying assumptions which can be highly subjective and often lack an empirical basis. Studies⁴ have shown that the difference between the PSC and the preferred bid is often marginal. In cases such as these, small changes in assumptions can mean that a bid no longer beats the PSC
- **Inaccuracy.** Even countries with established PPP programs have little objective data on which to base cost estimates. Without such data calculating with any accuracy how much a project will cost to run over 25–30 years is almost impossible
- **No reliable public sector alternative.** The PSC may be hypothetical, but it must refer to a project that could actually be implemented if PPP procurement was shown to be poor VfM. Often the PSC is poorly designed or ill-defined such that it doesn't reflect a realistic, implementable alternative. Indeed, an Australian study⁵ recommended against carrying out the PSC comparison where public sector provision is not a reasonable option

⁴ National Audit Office, (2013), “Review of the VfM assessment process for PFI”, Briefing for the House of Commons Treasury Select Committee

⁵ Fitzgerald, P. (2004), “Review of Partnerships Victoria Provided Infrastructure”, Report to the Treasurer

- **Manipulation.** The complexity of the PSC methodology can mask inherent uncertainties, and result in evaluation methods and results being inaccessible to all but the officials undertaking the evaluation. This opacity can enable manipulation in order to achieve desirable results. Indeed a UK parliamentary committee found several cases involving “manipulation of the underlying calculations and erroneous interpretation of the results”.⁶
- **Ignoring revenue.** Most countries do not incorporate differences in project revenue outturns between PPP and public procurement into the PSC. For example, in Korea, the revenue from ancillary uses of assets is assumed to be the same under both PPP and public options. In contrast, in France, ancillary revenue (and associated investment) is assumed only to occur in the PPP case—because administrative laws makes it difficult for a government entity to engage in commercial activities that are not core to its function.⁷

Overall, the public sector cannot precisely predict what it will cost the private sector to deliver the project or how they will price risk. In fact, this information asymmetry is exactly why competitive procurement processes are used.

Despite these limitations, the experience of many countries has demonstrated that the specificity of the PSC number can tempt public officials to over-rely on this numerical result at the expense of considering whether the project will achieve its objectives.

3.2.2 Other quantitative VfM analysis methods

Given the limitations in valuing risk in the build-up of the PSC, some countries have begun to explore more innovative analysis methodologies for comparing costs between PPP and conventional procurement.

Reference class forecasting

One innovative means to estimate cost outturns under different procurement methods is to oblige planners to base their estimates on a reference class of similar projects. This is designed to limit optimism bias—a forecast error that stems from actors taking an “inside view” and focusing on the specific project, rather than on the outcomes of similar completed projects. Reference class forecasting is officially endorsed by the American Planning Association and has shown itself to be more accurate than conventional forecasting in the US.⁸

Reference class forecasting predicts the outcome of a planned project based on actual outcomes in a reference class of similar projects. It does not require risk valuation. Instead, it involves:

- Identifying a relevant reference class of past projects. The class must be broad enough to be statistically meaningful but narrow enough to be truly comparable with the specific project
- Establishing a probability distribution of outcomes for the particular reference class. This necessitates having access to credible, empirical data for an

⁶ U.K. House of Commons, Committee of Public Accounts, (2003), “Delivering Better Value for Money from the Private Finance Initiative”. London

⁷ PPIAF, (2013), “Value-for-Money Analysis-Practices and Challenges”, Report from World Bank Global Round-Table, 28 May, 2013, Washington DC

⁸ EPEC, (2011), “The Non-Financial Benefits of PPPs: A Review of Concepts and Methodology”

adequate number of projects within the reference class to make statistically meaningful conclusions

- Comparing the specific project with the reference-class distribution to establish the most likely outcome for the specific project. The distribution should be used to reflect the willingness of public official to accept risk. For example, the upper percentiles (80-90%) should be used when public officials want a high degree of certainty that cost overrun will not occur.

Shadow bid models

Another innovative means to estimate cost outturns under PPP procurement methods is to produce shadow bids. Producing a shadow bid involves costing a project from the perspective of the private sector. The shadow bid is based on standard templates similar to those used by contractors to price their bids.

Shadow bids are more complex than the PSC and include additional costs. They give a more sophisticated estimate of the expected cost under PPP procurement. They can be used to assess the affordability of a project and the reasonableness of contractors' bids.

The shadow bid model is currently used in the UK. Past experience has shown that it can differ substantially from the PSC. For example, an examination of shadow bids and PSCs for three projects found that the estimated cost of private finance was greater and the estimated corporation tax was lower, in all three shadow bids. These differences arose from the different calculation methods used in the VfM quantitative model and the shadow bid model, and not from different input values.⁹

3.2.3 Qualitative analysis of project objectives

The quantitative measures discussed above still have one key limitation—they narrowly focus on cost. A cost-focused analysis implicitly assumes that different procurement methods achieve the project objective and the same level of benefits. A cost-focused analysis may yield a cost effective solution (the lowest cost way to deliver the required output), but it will not tell you which solution is VfM.

Despite the importance of examining project objectives and benefits as part of a VfM analysis, relatively few governments do this. Instead, governments tend to augment their quantitative (cost) analysis with a vaguely-defined qualitative analysis. This approach infers that the analysis of costs is more “scientific” and therefore more important than the analysis of benefits. But most importantly, it means that a poorly designed, but lower-cost project could be procured, even if there is a high risk that the project objectives won't be achieved.

Assessing the benefits associated with PPPs can be challenging and there is no international standard or best practice for doing this. Only some benefits can be valued in monetary terms (such as travel time savings). Other benefits may be quantifiable but not able to be valued in monetary terms (for example, improved educational outcomes for school students), or identifiable but not quantifiable (for example, an improved environment for prisoners). These challenges may lead governments to discount the importance of accounting for benefits in their VfM analysis. But the fact that benefits are difficult to assess does not diminish their importance.

⁹ National Audit Office, (2013), “Review of the VfM assessment process for PFI”, Briefing for the House of Commons Treasury Select Committee

In response to the limitations associated with a cost-focused VfM analysis, a principles-based framework focused on project objectives is required. Such a framework focused on understanding if the private sector has the incentives to deliver the project's objectives better than the public sector. This approach should be used to augment cost-focused VfM analysis. The four broad steps to such an approach are discussed below.

Step 1: What are the key costs and benefits

The private party must be able to influence the **key costs and benefits** that drive the achievement of project's objective for the PPP to be able to show VfM. A project may deliver a range of benefits and incur a variety of economic costs, but its overall economic viability will generally only be sensitive to a few of these.

The key costs are those that are the most significant over the life of the project. They will be relatively simple to identify. For example, tunnelling will always be a key cost of urban rail, and operating costs will always be a key cost of hospital PPPs. The key benefits are those that directly lead to the delivery of the project objective. For instance, if a public transport project has the objective of easing traffic congestion, commuters should see the key benefit of reduced travel time.

Step 2: what are the key risk events?

There will be a range of risks that may influence the project, but only a few will have a significant impact on the project's objective. Therefore, the next step in VfM analysis should be to identify the **key risks** that may impact the achievement of the project objective.

A standard risk allocation matrix is a good starting point for identifying risks. However, it is also important to consider if a project has unique features that will expose it to risks that are different to traditional PPPs. From the list of risks, the key risks are those that will affect the key costs and benefits to such an extent that the project will not achieve its objective.

For example, for a public transport PPP, the key costs are operating costs, and the key benefit is a reduction in commuter travel time. Risks that lead to operating cost overruns are important, but are not likely to undermine the project's overall viability. On the other hand, if the project does not reduce travel time savings for commuters, it will not achieve its objectives. There would be no point in constructing a PSC and choosing a low cost bidder if that bidder couldn't deliver the benefit of travel time savings.

Step 3: who manages the risk?

A project can only show VfM if the private party is responsible for, and has the ability to reduce, the impact of key project risks. Therefore, public officials need to ensure that the risks allocated to the private party will be effectively transferred. There are instances where poor project design means that the risk transfer is ineffective. For example, demand based risks cannot be effectively transferred unless outputs can be clearly defined and measured, and the contribution of the private party can be isolated

For some projects, full risk transfer may not even be possible. That is, even where risk has been contractually allocated, there can remain a residual risk that government may have to step in if a private party experiences difficulty meeting its obligations. This is likely to be the case for projects that are the sole supplier of an essential public service, such that the government would still be responsible for providing the service even if the project failed. In this case, any risk that could lead to project failure is not fully transferred.

The VfM analysis should take this into account, and not overstate the value of risk transfer. It should also identify any risk mitigants that may improve the project design.

Step 4: what are the private party's incentives to manage risk?

Simply because a particular risk has been allocated to the private sector is not a guarantee that the risk will be effectively managed, unless it has a strong incentive to do so. If the private party is poorly incentivised, the project's overall risk profile may even increase. The private party is incentivised to manage a risk when its benefit (or avoided cost) from managing the risk is less than the cost of managing the risk. Even if the private party is incentivised to manage the risk, it is also important to determine if they will manage the risk better than the public sector. To do this, consider if the public sector has access to similar or better incentives.

3.3 Securing VfM during project implementation

Securing VfM during project implementation is about effective risk management.

International experience has shown that PPP contracts require considerable management efforts on the part of the government. Sound project implementation is therefore crucial to the success of a PPP. Failure to adequately implement the project will inevitably erode its VfM and may ultimately undermine its objectives. There are many reasons for this and they have to do with the main characteristics of PPP projects, which typically:

- Involve long-term agreements where deviations, even slight, can have a significant cumulative positive or negative effect on the project's outcomes over time
- Involve complex tasks, where it is difficult to foresee all possible future events at the outset and in which it is important for the IA to maintain some room for manoeuvre
- Are generally designed around performance outputs that imply close monitoring during operation to ensure that the project delivers on its promises and, ultimately, VfM.

In particular, the initial stage of PPP implementation is a high risk period in the project cycle. It involves:

- acquiring the ROW or project site
- handing-over any existing assets
- delivering other up-front government obligations (such as viability gap funding or in-kind contributions)
- setting up the institutional structures that will govern and monitor the project over the concession period (such as a project steering group).

Failure to adequately undertake these tasks is likely to lead to long delays and large contingent liabilities for the government, both of which will erode a project's VfM and may ultimately undermine its objectives.

Securing VfM during project implementation is about managing the risk allocation set out in the concession agreement. This involves:

- Clarifying and/or modifying the allocation it when unforeseen risks or consequences of those risks arise

- Ensuring that the concessionaire bears the risks it is required to bear and mitigates them adequately
- Monitoring and managing effectively the risks borne by the IA.

Securing VfM may also involve exploiting any opportunities for public expenditure savings that arise over the course of a PPP contract. For example, if a new technology became available that could reduce costs or increase benefits, the government could incentivise the concessionaire to adopt this technology. Savings can be achieved—and better still, shared between the parties—only through proper monitoring by the government. These savings may enable the government to release financial resources that can be usefully reinvested in other projects.

3.4 Securing VfM following contract completion

Securing VfM following contract completion is about building an evidence base of outcomes and lessons learned to inform the design of future PPP

Though necessary to ensure the success of a project, the *ex-ante* VfM analysis does not guarantee that a project will deliver VfM. An *ex-post* VfM analysis is required to determine whether or not VfM has actually been delivered.

This information on actual project outcomes feeds back into the *ex-ante* VfM analyses of future projects. That is, information on past procurement (of PPPs and traditional projects) contributes to the evidence base used to assess *ex-ante* VfM. *Ex-post* evaluations are therefore necessary to improve the accuracy of *ex-ante* evaluations. They allow government officials to learn from their procurement decisions.

Ex-post evaluations are also important for:

- holding decision makers accountable for outcomes
- providing lessons that can contribute to the achievement of VfM for future public infrastructure projects
- highlighting aspects of the project that are not working (and may be able to be addressed through negotiations with the private party or by encouraging the public sector to manage its contractual obligations, such as imposition of the abatement regime, more effectively).

Ex-post VfM analysis is conducted in a similar manner to an economic appraisal, focusing on cost benefit analysis, based on what actually occurred as opposed to what was anticipated.

Many countries recognise the importance of *ex-post* VfM evaluation and make it a requirement. For example, in Australia, all PPP projects are audited by the Auditor General in the years following tendering. These audits examine whether the processes followed during project development and tendering were adequate to maximise the potential for VfM.

4 Conclusion: Key VfM principles

This report has drawn on international experience to provide guidance on how Chongqing can use PPPs to deliver better VfM than alternative procurement methods. This guidance can be summarised into three key principles.

VfM is the key reason for exploring PPP procurement

The key reason for using a PPP is that, for suitable projects, a PPP can deliver superior VfM for government than any alternative delivery model. This is achieved by harnessing private sector incentives for performance. PPPs do not provide “extra funds”, and thus their primary purpose is not to overcome fiscal constraints on government borrowings.

VfM is more likely to be secured if pursued throughout the entire procurement cycle

VfM cannot simply be measured by comparing the PSC to bids at the time they are received. Instead, VfM analysis should occur throughout the procurement cycle—from initial approval of the business case through to tendering. VfM analysis should also continue post financial close through ex-post evaluations that inform future procurement.

VfM is about achieving project objectives

VfM analysis is about assessing which method of procurement can best achieve the project’s objective(s). However, current practice tends to focus more narrowly on a quantitative analysis of risk-adjusted costs (that is, the comparison of the PSC to bids). While this is typically supplemented by qualitative analysis—namely a consideration of project suitability for PPP procurement—this approach implies too great an emphasis on the measurement of costs, and can lead to perverse outcomes. That is, the lowest cost bid will not deliver VfM if it does not also deliver the project’s objectives. Similarly, a bid may be relatively high-cost and still VfM if it best delivers the project’s objectives.

A principles-based framework for analysing VfM should focus on objectives

While some improvements can be made to the way risk is quantified, a VfM analysis framework that focuses on objectives rather than just on costs is required. This analysis should focus on understanding if the private sector has the incentives to deliver the project’s objectives better than the public sector. This approach is not an alternative to the PSC as such, but rather a more intuitive framework for assessing VfM, focused on project objectives rather than more narrowly measuring relative (risk-adjusted) costs.



T: +1 (202) 466-6790
F: +1 (202) 466-6797
1747 Pennsylvania Avenue
NW 12th Floor
WASHINGTON DC 20006
United States of America

T: +61 (2) 9231 6862
Level 1, 27 Macquarie Place
SYDNEY NSW 2000
Australia

T: +64 (4) 913 2800
F: +64 (4) 913 2808
Level 2, 88 The Terrace
PO Box 10-225
WELLINGTON 6143
New Zealand

T: +57 (1) 646 6626
F: +57 (1) 646 6850
Calle 100 No. 7-33
Torre 1, Piso 14
BOGOTÁ
Colombia

T: +33 (1) 45 27 24 55
F: +33 (1) 45 20 17 69
7 Rue Claude Chahu
PARIS 75116
France

----- www.castalia-advisors.com