



IMPROVING VALUE FOR MONEY IN SMALL-SCALE PPPs

NCP Research Paper

Abstract

There is an argument that small-scale projects cannot generate sufficient benefits to justify the relatively high cost of PPP procurement. Alternatively, small-scale PPPs are more likely to be sponsored by sub-national authorities and their impacts are concentrated on smaller populations. This Paper reviews international trends in small-scale PPPs and attempt to develop a toolkit of policies and measures to support their development and implementation. It also aims to address the obstacles facing project sponsors, private investors and lenders.

Disclaimer

The views, opinions, findings, and conclusions or recommendations expressed in this paper are strictly those of the author. They do not necessarily reflect the views of the NCP or the Saudi Government. The NCP and the Saudi Government take no responsibility for any errors or omissions in, or for the correctness of, the information contained in this paper.

June 2019

NCP Research Paper

Improving Value for Money in Small-Scale PPPs

Table of Contents

List of Acronyms.....	5
1. Introduction	6
1.1 Purpose of the Paper	6
1.2 Defining “Small”	6
1.3 Methodology.....	7
1.4 Structure of the Paper	8
2. International Trends in Small-Scale PPPs	9
2.1 Testing pre-conceptions	9
2.2 The Data.....	10
2.3 Analysis and Results.....	11
2.3.1 PPI Database	11
2.3.2 UK PFI.....	20
2.3.3 Case Studies – Cross-cutting analysis	26
2.4 Key Findings	31
3. Benefits and Risks of Small-Scale PPPs.....	33
3.1 Why do it? Potential benefits of SSPPPs	33
3.1.1 Potential benefits to end-users	33
3.1.2 Potential private sector benefits	34
3.1.3 Potential public sector benefits.....	34
3.2 Justifiable Concerns? Constraints and Potential risks of SSPPPs.....	35
3.2.1 Potential end-user implications.....	35
3.2.2 Potential private sector implications.....	35
3.2.3 Potential public sector risks and constraints.....	36
3.3 Key Findings	37
4. Experience of other countries	38
4.1 Specific Examples.....	38
4.2 Key Findings	42
5. Addressing the Constraints – A Toolkit for Supporting SSPPPs.....	44
5.1 Analytical framework.....	44
5.2 A better Measure of “Size”	45
5.3 Policy and institutional framework to support SSPPPs	48

5.4 Measures to address preparation and tendering costs	48
5.5 Measures to address contract management costs	50
5.6 Measures to address PA capabilities	51
5.7 Measures to address Contractor capabilities	52
5.8 Measures to address Bankability	53
6. Conclusions	54
6.1 Key Findings and Conclusions	54
6.2 A Way Ahead for SSPPPs.....	55
6.3 Conclusions	57
References	59
Appendix 1 Scoring of potential measures of “size”	61
Appendix 2: Specific Measures to Support SSPPPs	63
A2.1 Policy and institutional framework	63
A2.2 Measures to address preparation and tendering costs	63
A2.3 Measures to Address Contract Management Costs.....	72
A2.4 Measures to address PA capabilities.....	75
A.2.5 Measures to Address Contractor Capabilities.....	78
A.2.6 Measures to Address Bankability	79
Appendix 3: PPI Data Tabulations.....	83
Appendix 4: UKPFI Data Tabulations	85

List of Figures

Figure 1 Methodology.....	8
Figure 2 Trends in PPI by size 1994-2018	11
Figure 3 Trends in Small PPI 1994-2018	12
Figure 4 Shares of Small and Large PPI 1994-2018	12
Figure 5 Total investment in Large and Small PPI 1994-2018	13
Figure 6 Investment in Small PPI 1994-2018	13
Figure 7 Split between large and small PPI by value 1994-2018.....	14
Figure 8 Regional split of small PPI 1994-2018 cross section.....	14
Figure 9 Regional split of small PPI 1994-2018 time-series.....	14
Figure 10 Small PPI by sector, 1994-2018 cross-section	15
Figure 11 Small PPI by sector, 1994-2018, time-series	15
Figure 12 Types of PPI structure by size of project, 1994-2018 cross-section	16
Figure 13 Sub-types of PPI structure by size of project, 1994-2018 cross-section	17
Figure 14 PPI by size and contract term, 1994-2018 cross-section (number of projects)	20
Figure 15 PPI by size and contract term, 1994-2018 cross-section (cumulative %).....	20
Figure 16 Trends in UKPFI by size 1995-2016.....	21
Figure 17 Trends in small UKPFI, 1995-2016	21
Figure 18 Shares of small and large UKPFI by number of projects, 1995-2017	22
Figure 19 Total investment in small and large UKPFI 1995-2016.....	22
Figure 20 Investment in small UKPFI 1995-2016.....	22
Figure 21 Split between small and large UKPFI by value 1995-2016	23
Figure 22 Small UKPFI by sector 1995-2016 cross-section.....	23
Figure 23 UKPFI by size and contract term, 1995-2016 cross-section (number of projects).....	25
Figure 24 A Multi-Dimensional Framework for Supporting SSPPPs.....	44
Figure 25 Algorithm for developing an SSPPP support package	57

List of Tables

Table 1 "Small" PPP hurdle rates, various countries	7
Table 2 Questions about small-scale PPPs	9
Table 3 Most common PPI structures, 1994-2018 cross-section	16
Table 4 PPI by size and type of PA, 1994-2018 cross-section.....	18
Table 5 PPI by size and contract term, 1994-2018 cross-section.....	19
Table 6 UKPFI by size and type of Procuring Authority, 1995-2016 cross-section.....	24
Table 7 UKPFI by size and contract duration, 1995-2016 cross-section	25
Table 8 Cross-cutting analysis.....	27
Table 9 Some Questions about SSPPPs ... and answers?	31
Table 10 Filtering criteria for measures of project size	45
Table 11 Possible indicators of PPP "size"	46
Table 12 How well do the potential indicators meet the criteria?	47
Table 13 A holistic approach to SSPPPs – key support measures	54
Table 14 Trends in Small and large PPPs, 1994-2018 (number of projects)	83
Table 15 Trends in small and large PPPs by investment value, 1994-2018 (USDm)	83
Table 16 Trends in SSPPPs by World Bank Region, 1994-2018 (number of projects).....	83
Table 17 Trends in SSPPPs by sector, 1994-2018 (number of projects).....	84
Table 18 Trends in small and large UKPFIs, 1995-2016 (number of projects)	85
Table 19 Trends in small and large UKPFIs, 1995-2016 (investment USDm)	85
Table 20 Trends in small UKPFIs by sector (aggregated), 1995-2016 (number of projects).....	85
Table 21 Trends in small UKPFIs by sector (disaggregated), 1995-2016 (number of projects)	86

List of Acronyms

AUD	Australian dollars
b	billion
BLT	Build-Lease-Transfer
BOO	Build-Own-Operate
BOOT	Build-Own-Operate-Transfer
BOT	Build-Operate-Transfer
BRL	Brazilian Reals
BROT	Build-Rehabilitate-Operate-Transfer
BTL	Build-Transfer-Lease
BTO	Build-Transfer-Operate
CAD	Canadian dollars
capex	Capital expenditure
DBFM	Design-Build-Finance-Maintain
DBFO	Design-Build-Finance-Operate
DBFOM	Design-Build-Finance-Operate-Maintain
DBFOT	Design-Build-Finance-Operate-Transfer
EAP	East Asia and the Pacific
ECA	Europe and Central Asia
EUR, €	Euros
GBP, £	British pounds
GDP	Gross Domestic Product
HM Treasury	Her Majesty's Treasury
ICT	Information and Communications Technology
IRR	Internal Rate of Return
KRW	Korean won
KSA	Kingdom of Saudi Arabia
LAC	Latin America and the Caribbean
m	million
MENA	Middle East and North Africa
Mgt	Management
MOF	ministry of Finance
n.a.	Not applicable/not available
O&M	Operation and Maintenance
OECD	Organization for Economic Co-operation and Development
opex	Operating expenditure
PA	Procuring Authority
PFI, PF1, PF2	UK Private Finance Initiative
PPI	Private Participation in Infrastructure
PPP	Public-Private Partnership
Q&A	Question and answer
RFP	Request for Proposals
RFQ	Request for Qualification
RLT	Rehabilitate-Lease-Transfer
ROT	Rehabilitate-Operate-Transfer
SA	South Asia
SAR	Saudi Arabian Rials
SSA	Sub-Saharan Africa
SSPPP	Small-scale PPP
UK	United Kingdom
USD, \$	United states dollars
VfM	Value for Money
VGf	Viability Gap Funding

1. Introduction

1.1 Purpose of the Paper

As a method of procurement, Public-Private Partnerships (PPPs) can be significantly more complex than traditional methods used by the public sector. This is largely because PPPs require the private partner (Contractor) to take on more of the project's risk and they, and their lenders, need to understand those risks as much as possible. This requires significant work in preparing and analyzing proposed PPP projects and in completing the tender process to appoint the Contractor. Furthermore, since PPP projects extend beyond the completion of construction to include the provision of services by the Contractor, there is a need for the government party to put in place contract monitoring and management systems. These additional costs are largely the same regardless of the size of the project.

The decision on whether to select PPP for a particular project is determined by whether the project generates greater Value for Money (VfM) as a PPP when compared with traditional procurement methods. In essence, this means that the additional costs of using the PPP approach must be outweighed by the additional benefits that PPP brings, which arise from efficiency gains and other factors. For large infrastructure projects, these additional PPP-related costs amount to a very small share of the total project value (investment plus operations). However, for smaller projects these additional costs are more difficult to justify, since the PPP-specific benefits would have to be a much higher relative to total project value in order to outweigh the PPP-specific costs.

As a result, some countries (including Singapore, Australia and the UK) consider smaller projects to be unsuitable for PPP procurement. In these countries, only projects (or bundles of projects) that are above a certain size can be included in their PPP programs. At the same time, there are numerous examples around the world of smaller PPP projects that have significant impacts on the lives of their users. This is particularly the case for projects focused on specific regions or groups, such as municipalities, small "off-grid" power projects or rural water supplies. Excluding smaller projects from a PPP program purely on the basis of size therefore risks missing out on these potential benefits. This research paper argues that there are good reasons not to exclude small-scale PPPs (SSPPPs) if they are well structured, and goes on to suggest a number of ways to improve VfM in such cases.

1.2 Defining "Small"

Ideally, the "size" of a project should incorporate both capital investment (capex) and operating expenses (opex) since both of these are needed for the project to provide services and generate benefits. In practice, however, those countries that do set hurdle rates mostly rely on capex alone (See Table 1 below). This is presumably for administrative convenience, since construction costs can be estimated early in the process. However, this approach creates a potential bias towards new infrastructure PPPs and against services PPPs or rehabilitation projects, where capex requirements may be lower even if the benefits are the same.

In an ideal world, each project would be assessed on its merits using VFM as the criterion. However, this can be both time consuming and costly. The purpose of using a simple measure to filter out unsuitable projects is to eliminate such projects before significant resources are spent on the analysis. Requiring a full VfM assessment of every project would defeat the object.

A measure of project size can also be important from another perspective. Countries that wish to proactively support small-scale PPPs (SSPPPs) need a way to determine whether a particular project should benefit from the available support measures.

Table 1 "Small" PPP hurdle rates, various countries

Country	Indicator	Hurdle	References
Singapore	Investment cost (USD)	50m	(World Bank/APMG, 2017)
Australia	Investment cost (AUD)	50m (USD35m)	(Australian Capital Territory, 2016)
Canada¹	Investment cost (CAD)	50m (USD37m)	(The Canadian Council for Public-Private Partnerships, 2016)
UK	Investment cost (GBP)	20m (USD26m)	(HM Treasury, 2003)
Brazil	Investment cost (BRL)	20m (USD12m)	(World Bank/APMG, 2017)
Ethiopia	contract Value (USD)	50m	(Ministry of Finance, Federal Democratic Republic of Ethiopia, 2017)
World Bank	Investment cost (USD)	50m	(A Ahmad, 2014)
Fiji (mini-grids)	Not on national grid + no. of customers	≥25 customers	(D. Marett, 2018)

Table 1 shows a wide variation in hurdle values for small PPPs across different countries. This is unlikely to be justified on the basis of cost differences alone. The variation highlights the difficulty in identifying a fundamental measure of "size" that is both readily available and has a direct relationship to VfM.

Most countries use investment cost as a proxy for project size. This indicator has a significant drawback, in that it carries an inherent bias against services PPPs and projects with a relatively small investment component such as rehabilitation, brownfield investments, leases and some types of concession, where the Contractor uses existing public infrastructure to provide a public service. Section 5.2. will elaborate on this issue.

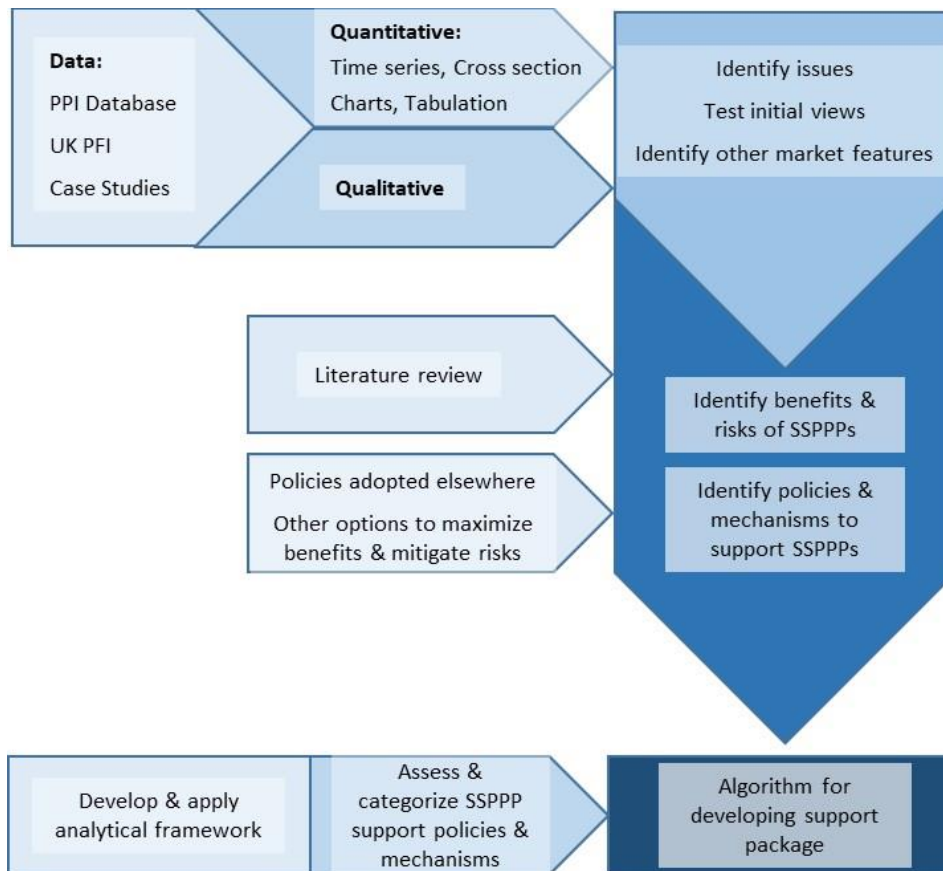
1.3 Methodology

This research uses a holistic approach to investigate SSPPPs. First, it reviews the benefits and risks associated with SSPPPs, based on a review of the literature. Second, it examines the market by using a combination of quantitative (tabulations and charts) and qualitative (case studies) analysis to test common pre-conceptions about SSPPPs. Third, it reviews and evaluates policies adopted by other countries to support SSPPPs. Fourth, it develops and applies an analytical framework to categorize the risks and proposes a range of measures to address these risks in the form of a package or toolkit. Finally, it develops an algorithm to guide governments in developing support programs to encourage SSPPPs. The methodology is illustrated in

¹ British Columbia

Figure 1 below.

Figure 1 Methodology



1.4 Structure of the Paper

The remainder of this Paper is structured as follows:

- Section 2 examines recent trends in SSPPPs;
- Section 3 highlights some of the key benefits of SSPPPs, and the constraints and risks that sponsors of SSPPPs may face;
- Section 4 reviews the PSPPP support policies adopted by other countries;
- Section 5 identifies options for addressing the constraints and risks to improve the viability of SSPPPs;
- Section 6 compiles the analysis of the previous Sections to present key findings and conclusions and sets out a possible road map for implementing a SSPPP support package.

2. International Trends in Small-Scale PPPs

2.1 Testing pre-conceptions

Countries that set hurdles for minimum PPP project size may take the view that SSPPPs cannot generate sufficient VfM to justify the resources needed to structure, procure and monitor them. One way to test this proposition is to review trends in PPP transactions. The increasing use of PPP procurement for small-scale projects and numerous examples of successful SSPPPs would both suggest that SSPPPs can generate positive VfM.

This research uses three sources, each shedding light on different aspects² of the proposition:

1. The World Bank Private Participation in Infrastructure (PPI) database (World Bank, 2019), covering more than 7,100 PPP and privatization transactions that reached financial close between 1990 and 2018.
2. The UK Treasury database of PF1 and PF2 projects (HM Treasury), covering 715 projects that closed between 1990 and 2017.
3. Case studies on 26 SSPPPs (various sources).

The analysis was structured to test a number of specific questions on SSPPPs. These questions are listed in Table 2 below, along with our a priori expectations as to the outcomes. At the end of this Section, we will revisit these questions in the light of the analysis to assess the extent to which they are justified by the data.

Table 2 Questions about small-scale PPPs

Issue	A priori view	Explanation
Are SSPPPs becoming more or less popular?	More popular	As countries gain experience, standardization becomes easier, reducing transaction costs.
Are SSPPPs more likely to be sponsored at national or sub-national level?	Sub-national	Regional and Municipal authorities serve smaller populations and are more likely to be budget constrained.
Are certain sectors more suitable for SSPPPs?	Social infrastructure, urban transport, housing	Economic infrastructure (power, water, transport) often involves large, national projects. Urban infrastructure projects are often undertaken by local and municipal authorities.
Are certain structures more suitable for SSPPPs?	Services, brownfield	These projects require less capital spend than equivalent greenfield infrastructure projects.
Are SSPPP contracts shorter or longer term than average?	Shorter	contract term is often linked to the life of the asset, the term of any financing and the resulting affordability of the services ³ .

² This approach was also used in (A Ahmad, 2014). A comprehensive global database of completed PPP projects has not been identified.

³ For example, a USD100m loan would need to generate USD1.7m per month to repay the capital (excluding interest) over 5 years; over 15 years it would only have to generate USD0.6m.

SSPPPs that require less financing can be shorter without impacting affordability.

For the purposes of analysis, the following Sections adopt the World Bank benchmark of USD50m investment cost to define “small”.

2.2 The Data

The **World Bank PPI** has a large sample size and covers a 28-year timeframe, which allows examination of trends over time. However, there are limitations:

- i) It only covers low and middle-income countries, thereby excluding most OECD member states, many of which have strong PPP experience;
- ii) It only includes economic infrastructure PPPs, specifically in the energy, water & sewerage, transport and ICT sectors. In other words, it excludes social infrastructure (health, education, housing, etc.) projects that may be more likely to involve SSPPPs; and
- iii) It relies on individual countries to provide the data, which may therefore be incomplete or delayed, especially for projects sponsored by sub-national authorities (which are more likely to be smaller than national-level PPPs).

This suggests that the PPI database may under-count SSPPPs. Nevertheless, it does include 114 projects with an investment cost less than USD50m.

The **UK PFI** database provides detailed information on 715 PF1 and PF2 projects that closed between 1990 and 2017. As the UK is a high income economy with a long PPP track record, this may help counterbalance some of the gaps in the PPI database, especially given the inclusion of a number of health and education projects. 363⁴ projects come in below the USD50m hurdle. 185 projects fall below the UK government’s SSPPP hurdle of GBP20m, since they were launched before that hurdle was adopted in 2010.

Both the PPI and UKPFI databases present financial information in nominal terms, ignoring any inflation effects. Similarly, the hurdle rate for small PPPs is not adjusted for inflation. Over the relatively long time periods covered (28 and 27 years, respectively), therefore, inflation in investment costs will push projects over the “small” hurdle. Inflation is a purely financial phenomenon, while the “viability” of a project is partly driven by physical parameters. This creates an artificial downward trend in the number of small PPPs being undertaken, as projects exiting the “small” category at the top of the range are not replaced at the bottom.

Furthermore, many countries, including the UK, allow smaller projects to be grouped in order to meet size hurdles. To the extent that such grouped projects are tendered as a single unit, this would under-count the actual number of SSPPP projects being implemented.

The aim of the **Case Study** analysis is to supplement the quantitative analysis of the PPI and UK PFI data with a qualitative assessment of performance for a number of SSPPPs. An advantage of this approach is

⁴ For simplicity all costs were converted using the June 2019 exchange rate of GBP1 = USD1.26. Technically it would be more accurate to use the average exchange rate over the period or the rate prevailing for each project at the time of financial close. However, while this may affect the categorization of some projects at the margin, it would not materially affect the conclusions.

that it covers the operations phase, which the other databases do not, and in most cases includes discussion on obstacles faced, which can provide clues as to whether these were related to the size of the project. On the other hand, the sample of 26 projects is quite small and most of the examples were from one country (India, with 16/26). Generally, the results should be seen as indicative only. Furthermore, the case studies came from a variety of sources and the information available may not be consistent across the sample.

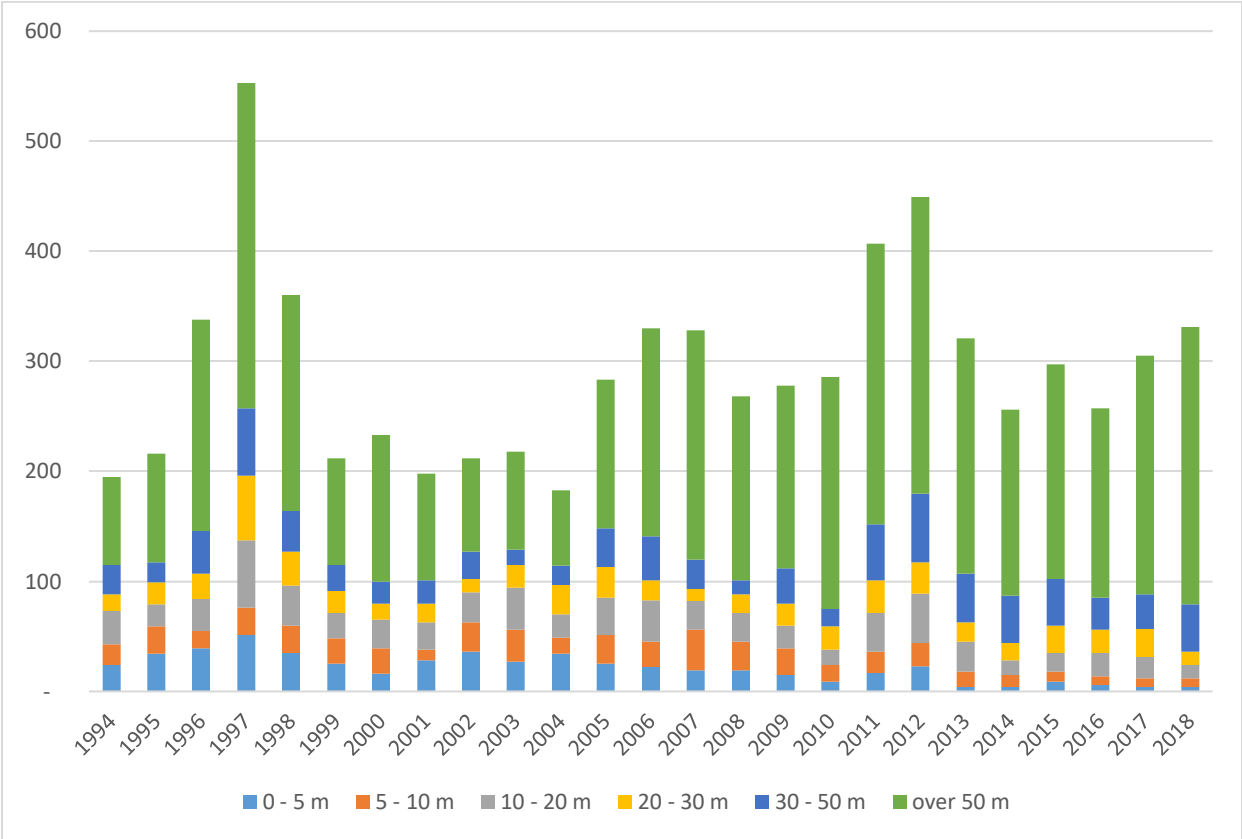
2.3 Analysis and Results

2.3.1 PPI Database

The PPI database includes 7,314 projects that reached financial close between 1994 and 2018, of which, 3,062 had a total investment of USD50m or below. Various time series and cross-section tabulations of the data are included in Appendix 3.

Figure 2 below presents the PPI data as a time series in which it shows the number of large and small projects reaching financial close each year. The data for small projects was further disaggregated to identify whether there are any major differences within the USD0 – 50m category.

Figure 2 Trends in PPI by size 1994-2018



The data illustrated in Figure 2 suggests that the market is quite cyclical, with peaks in 1997, 2006 and 2012⁵. In general, the number of small PPPs has moved in line with the market, certainly in terms of

⁵ In order to close in a particular year, the preparation, structuring and tender process would have started at least 18-24 months previously.

matching peaks. There seems to have been a decline in the number of small PPPs being closed after 2012, and this decline has been mostly felt in the smallest categories. These findings are examined further in Figure 3 and Figure 4 below.

Figure 3 Trends in Small PPI 1994-2018

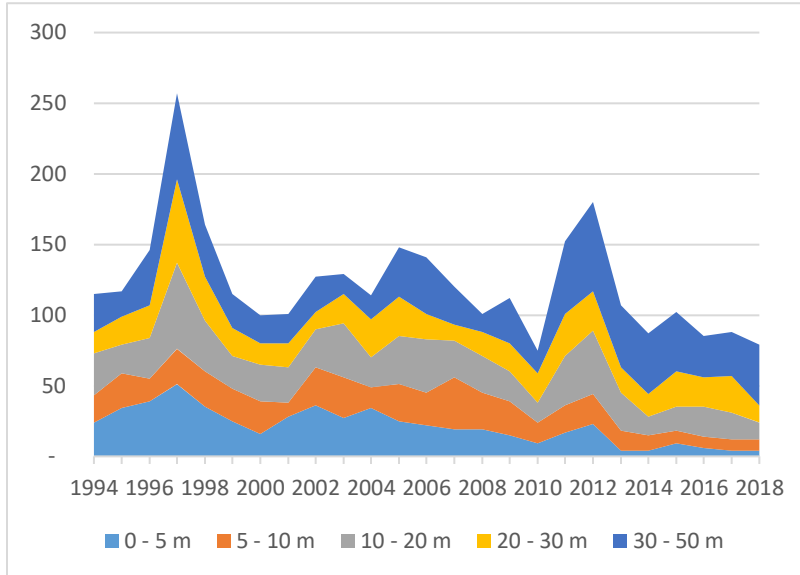


Figure 3 shows a clear downward trend in the number of small PPPs from 2005, with a temporary recovery in 2011 and 2012. The average number of small PPPs closed in the first half of the period (1994-2009) was 132 projects per year. For the second half (2010-2018), this fell to 106 per year, a decline of nearly 20%. Furthermore, the 2018 uptick in total closures was not matched in small PPPs, which continued to decline.

As shown, the decline appears greatest among the smallest categories. By 2018, the USD0-5m category had fallen to only 4 projects closed, compared to a 1997 peak of 51. For the USD5-10m category, the peak was 37 projects in 2007, falling to 12 by 2018. The magnitude of this decline appears too great to be attributable to inflation alone, suggesting that there has been a real decline in sub-USD50m projects, at least in the sectors covered by the PPI database.

Figure 4 Shares of Small and Large PPI 1994-2018

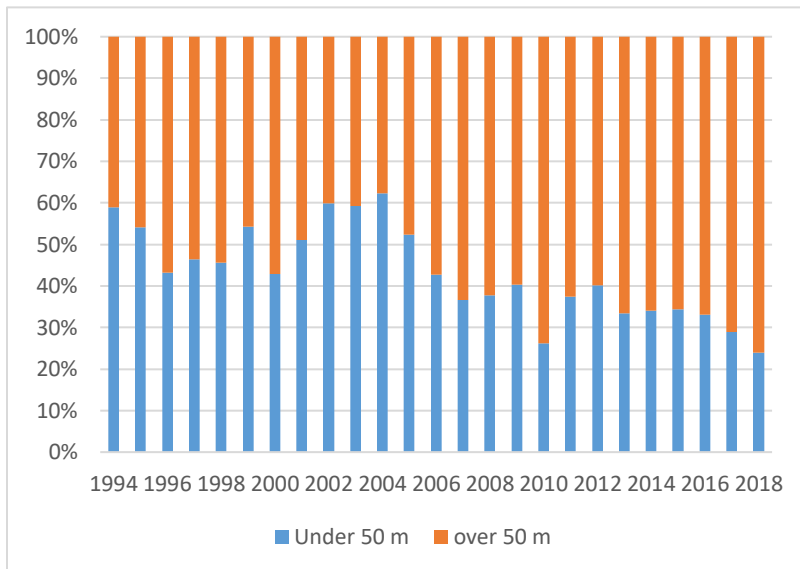
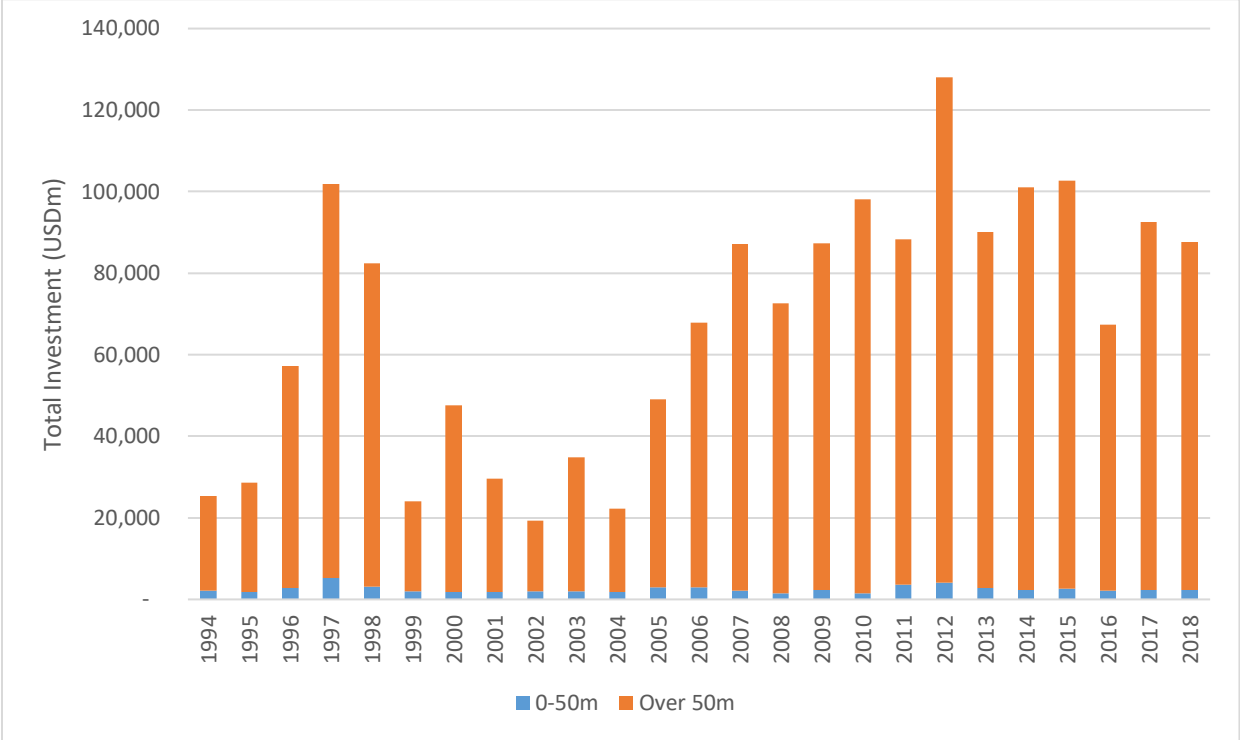


Figure 4 illustrates the declining share of small PPPs over the period, from 1994-2006 (40-60%), compared to 2007-2018 (20-40%). It is unlikely that such a dramatic decline can be explained entirely by inflation, which has the effect of pushing smaller projects above the USD50m hurdle over time.

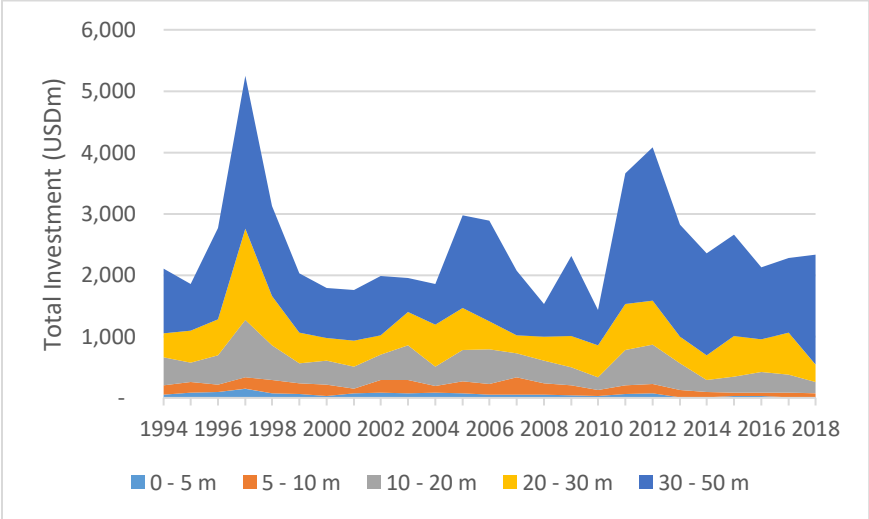
The same analysis can be carried out in terms of the total investment rather than the total number of projects. As presented in the Figures below, total investment in large PPPs has significantly exceeded that in small PPPs over the period.

Figure 5 Total investment in Large and Small PPI 1994-2018



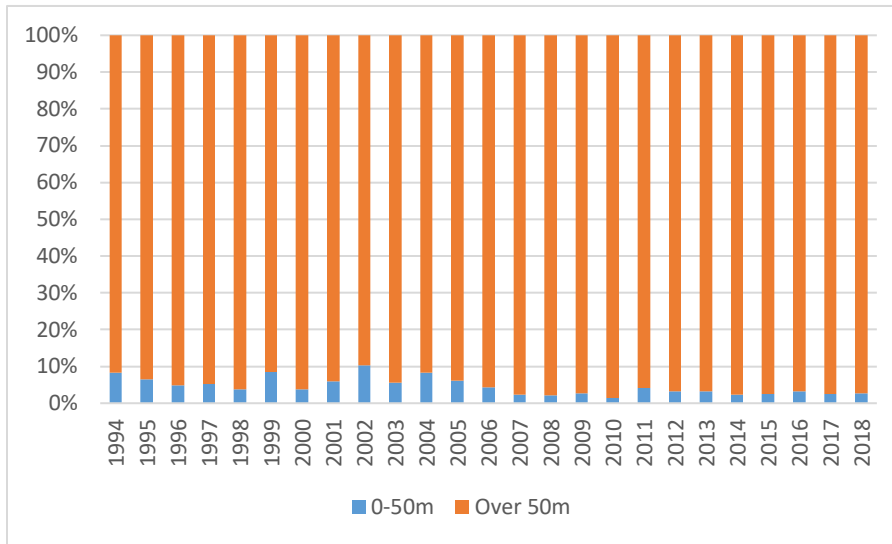
The data shows that investments in large PPPs have grown significantly over the period, with peaks of USD97b in 1997 and USD124b in 2012. While the value of investment in SSPPPs has followed a similar cyclical pattern, the peaks show a downward trend: USD5b in 1997 falling to USD4b in 2012.

Figure 6 Investment in Small PPI 1994-2018



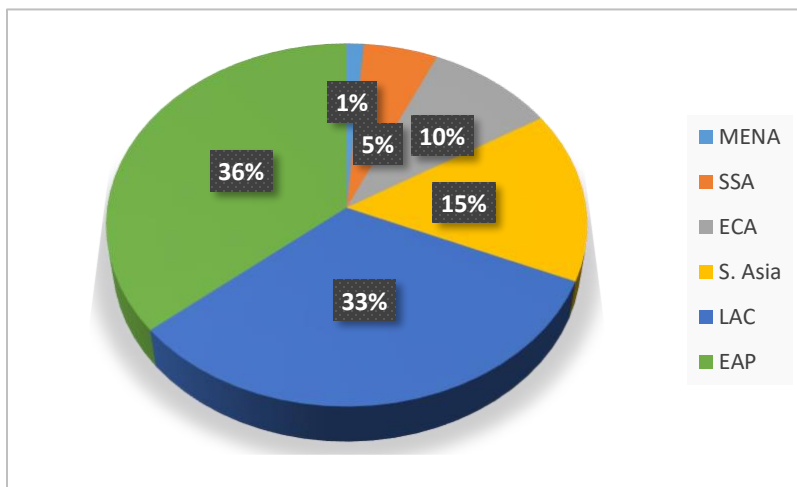
From a value perspective, there has been a marked shift towards larger projects even within the SSPPP category. This may partly be driven by inflation, which, as noted previously, would tend to increase the cost of all projects over time. However, it could also reflect a genuine move away from the smallest projects.

Figure 7 Split between large and small PPI by value 1994-2018



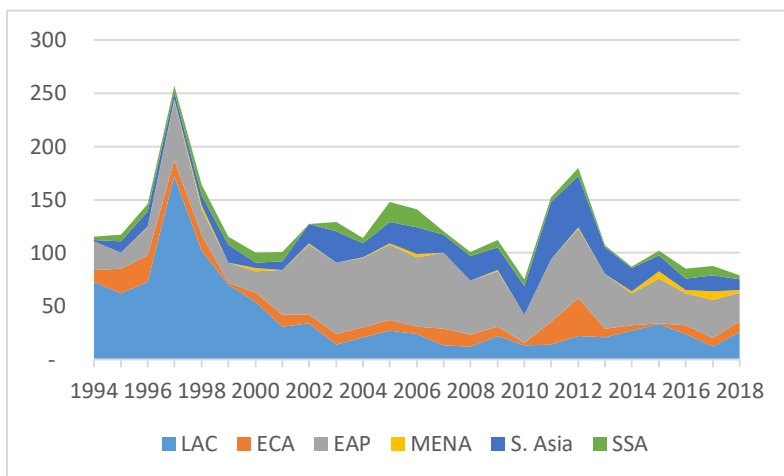
The share of SSPPP investment in the total has also been on a downward trend, peaking at 10% in 2002 and reaching its lowest point in 2010 at 1%. The average share was 4% over the entire period but this hides a significant decline. The average between 1994 and 2005 was 6%, while between 2006 and 2018 it was only 3%.

Figure 8 Regional split of small PPI 1994-2018 cross section



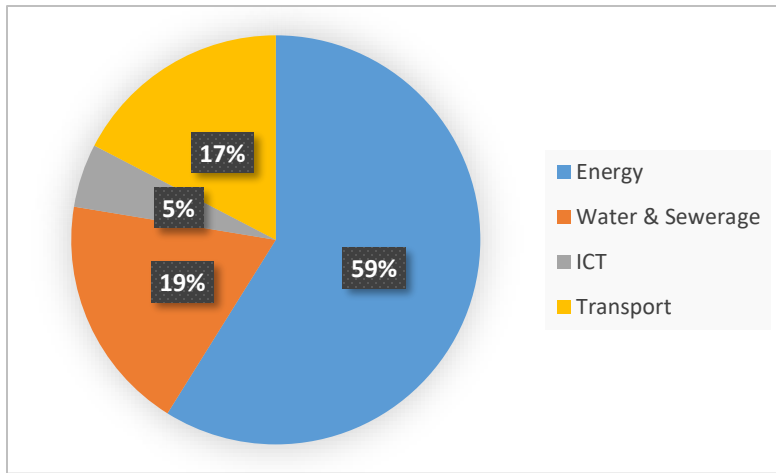
Looking at the regional split (Figure 8), over the whole period East Asia and the Pacific (EAP) and Latin America and the Caribbean (LAC) had the largest shares of SSPPPs at 36% and 33% respectively. Middle East and North Africa (MENA) had the smallest share, at 1% or 39 projects.

Figure 9 Regional split of small PPI 1994-2018 time-series



There have been some shifts in the regional composition over time. As illustrated in Figure 9, South Asia and EAP showed an increase in their shares of SSPPPs while LAC showed a reduction over the period. Much of the MENA activity has been recent; 22 of the 39 SSPPPs completed in that region were closed in the final four years (2014-2018) of the period.

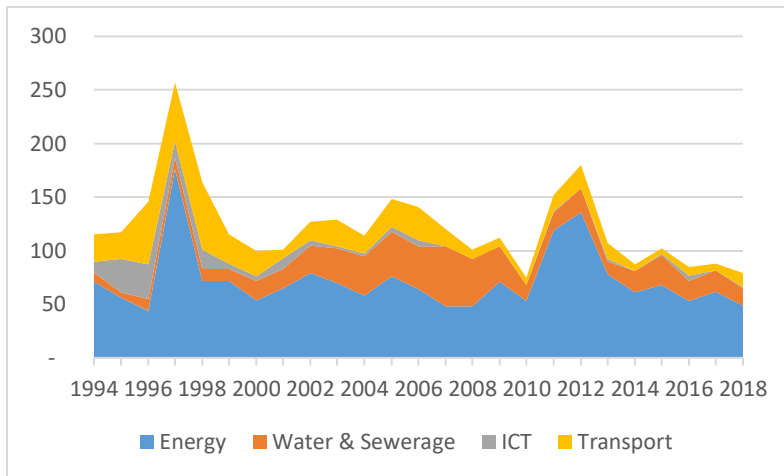
Figure 10 Small PPI by sector, 1994-2018 cross-section



In terms of the sectoral breakdown of SSPPPs (Figure 10), energy is by far the most significant, followed by water, transport and ICT. Power is one of the first to feel public sector investment constraints, as demand frequently outpaces both economic growth and the ability of emerging market governments to invest in new capacity. The economic benefits from power investments mean that users are more willing to pay. At the same time, the technologies, PPP structures

and contracts are mature and well known to stakeholders. Power generation, in particular, is usually the first sector to use PPP as a procurement mechanism. Water & sewerage tends to follow on from power – governments in emerging markets often find it more difficult to set tariffs that cover costs in this sector. As a result, PPP structures can be more complex, especially for water networks.

Figure 11 Small PPI by sector, 1994-2018, time-series



Telecoms is another early adopter usually through privatization of state-owned telecoms operators rather than PPP. Typically, this is accompanied by liberalization, allowing new players into the market. Other than the privatization itself, which is a one-off event, subsequent investment is treated as purely private sector behavior and would not be picked up by PPP databases. This is illustrated in Figure 11, which shows that most of

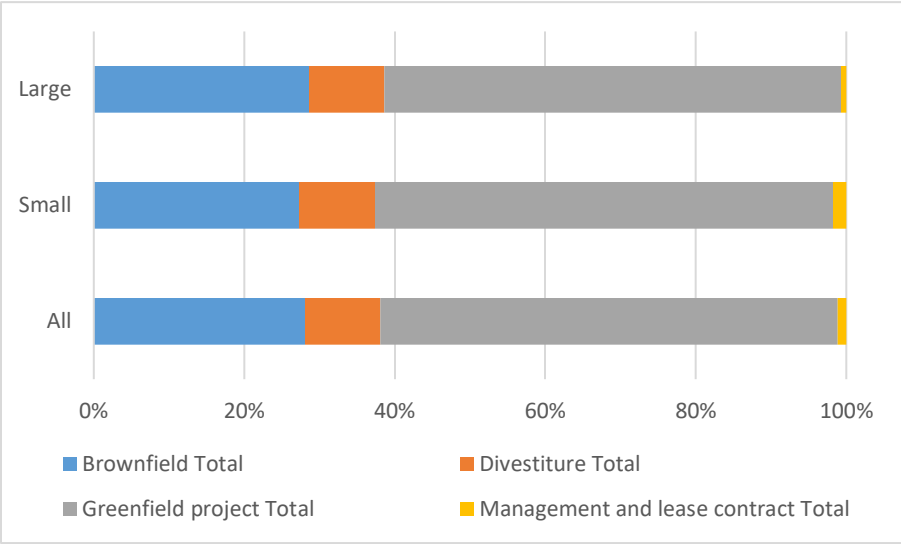
the ICT projects were completed in the first half of the period. 125 of the 154 SSPPP ICT projects (81%) were completed between 1998 and 2001, only 10 were completed after 2006.

The PPI database also provides information on the PPP structure used for each project. Table 3 below presents the data on PPP structures for all projects including SSPPPs and larger PPPs separately. It shows that, SSPPPs are more likely to use services structures such as leases and management contracts. This is illustrated in Figure 12 and at a more granular level in Figure 13.

Table 3 Most common PPI structures, 1994-2018 cross-section

Type of PPP	Subtype of PPI	All Projects		Below USD50m		Above USD50m	
		# of Projects	Investment (USDm)	# of Projects	Investment (USDm)	# of Projects	Investment (USDm)
Brownfield	Build, rehabilitate, operate, and transfer	1,363	347,939	422	9,452	941	338,487
	Rehabilitate, lease or rent, and transfer	63	7,753	28	607	35	7,146
	Rehabilitate, operate, and transfer	615	73,286	382	5,904	233	67,382
	Other	5	1,427			5	1,427
	Not Available	7	2,018	1	37	6	1,981
Brownfield Total		2,041	432,423	832	15,962	1,209	413,016
Divestiture (Privatization)	Full	206	62,219	119	2,158	87	60,061
	Partial	525	160,189	189	4,000	336	156,188
	Other	1	195			1	195
Divestiture Total		731	222,603	308	6,158	423	216,249
Greenfield project	Build, lease, and transfer	27	7,203	10	202	17	7,002
	Build, operate, and transfer	2,244	558,325	991	20,987	1,253	537,338
	Build, own, and operate	1,812	408,399	663	14,794	1,149	393,604
	Merchant	273	44,931	136	2,063	137	42,868
	Rental	61	1,816	54	867	7	949
	Other	2	269			2	269
	Not Available	27	6,703	12	331	15	6,372
Greenfield project Total		4,417	1,027,646	1,854	38,913	2,563	981,761
Management and lease contract	Lease contract	49	7,300	30	384	19	6,916
	Management contract	34	2,993	25	242	9	2,751
Management and lease contract Total		83	10,292	55	626	28	9,667
Grand Total		7,272	1,692,964	3,049	61,659	4,223	1,620,692

Figure 12 Types of PPI structure by size of project, 1994-2018 cross-section



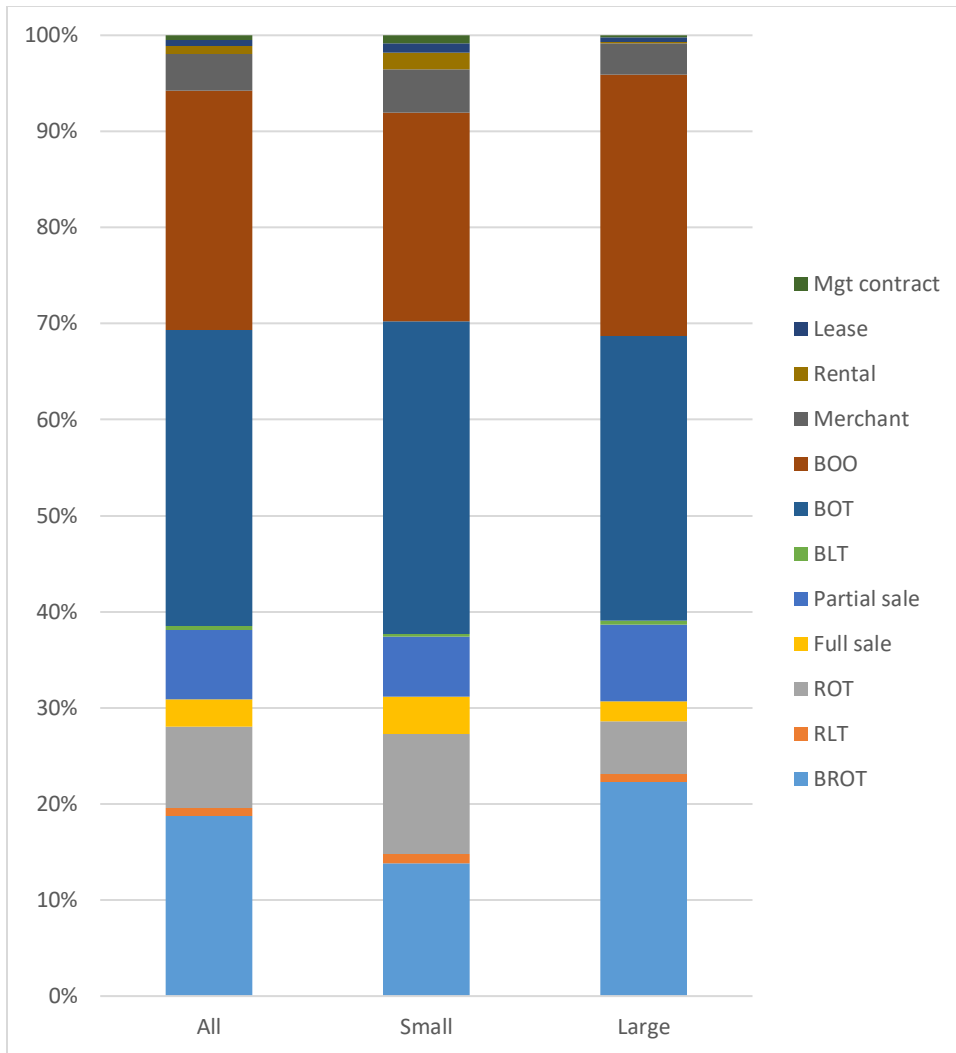
At this level of aggregation, there is slight difference between small and large PPPs. 2% of SSPPPs used management contract or lease structures compared to 1% of large PPPs. Since services-only structures are more likely to require less investment, this is in line with expectations, although one might have expected a more marked difference.

Brownfield projects made up a slightly higher portion of larger PPPs than SSPPPs (29% vs 27%). This is somewhat counter-intuitive, as one would expect brownfield projects to require less investment and therefore would be more likely to fall into the SSPPP category.

It is likely that these findings are affected by the data concerns noted above. The PPI database focuses on infrastructure investment projects. A pure services-only PPP would not appear. Furthermore, the database excludes social sectors such as health, education and housing, which may be more likely to include smaller projects.

Disaggregating these categories further exposes more marked differences, as shown in Figure 13.

Figure 13 Sub-types of PPI structure by size of project, 1994-2018 cross-section



As shown above, brownfield projects SSPPPs are more likely to use Rehabilitate-Operate-Transfer (ROT) than larger projects, which more often use Build-Rehabilitate-Operate-Transfer (BROT). This is consistent with the previous propositions, since BROT projects are more likely to involve higher capex. For privatizations, SSPPPs are more likely to involve a 100% sale. Again, consistent – small assets are more likely to involve non-core, non-strategic activities for which government does not need to retain a stake. For greenfield projects, SSPPPs are less likely to use BOO structures and more likely to rent assets or use merchant structures⁶ than large PPPs. Finally, as noted above, SSPPPs are more likely to use management contract and lease arrangements than large PPPs.

The PPI data confirms the premise that SSPPPs are more likely to be sponsored by sub-national (regional, municipal or local authorities, State-Owned Enterprises (SOEs), universities, etc), as shown in Table 4.

⁶ “Merchant. A private sponsor builds a new facility in a liberalized market in which the government provides no revenue or payment guarantees. The private developer assumes construction, operating, and market risk for the project (for example, a merchant power plant).” (World Bank, 2019)

Table 4 PPI by size and type of PA, 1994-2018 cross-section

Procuring Authority	All Projects		Below USD50m		Above USD50m	
	# of Projects	Investment (USDm)	# of Projects	Investment (USDm)	# of Projects	Investment (USDm)
National	3,641	1,084,391	1,132	25,373	2,509	1,059,018
Sub-national	2,067	319,361	1,143	22,296	924	297,065
n.a.	1,606	289,211	787	14,358	819	274,853
Grand Total	7,314	1,692,964	3,062	62,027	4,252	1,630,936
% of total						
National	50%	64%	37%	41%	59%	65%
Sub-national	28%	19%	37%	36%	22%	18%
n.a.	22%	17%	26%	23%	19%	17%
Grand Total	100%	100%	100%	100%	100%	100%

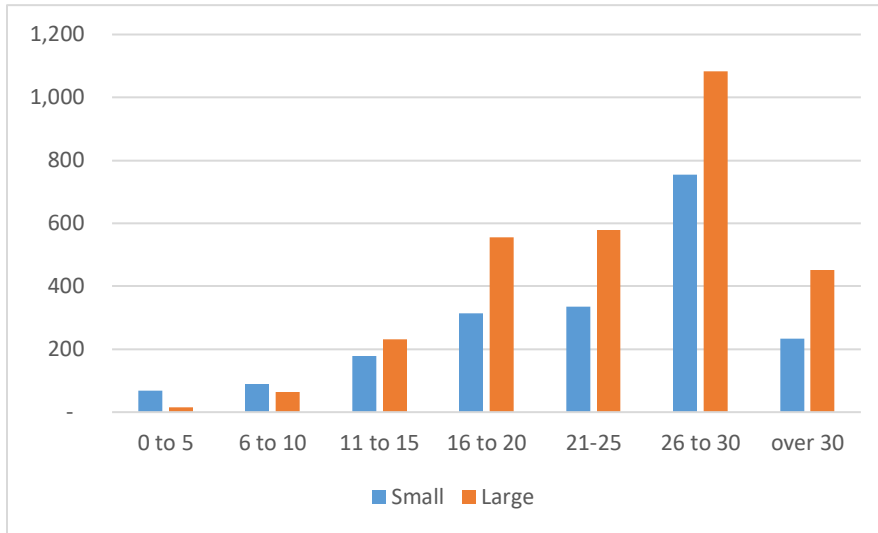
By number of projects, 37% of SSPPPs were sponsored by sub-national entities, compared to 22% of larger projects. Similarly, 59% of larger projects were sponsored by national authorities compared to 37% of SSPPPs. This supports the proposition that sub-national entities are more likely to have smaller projects. Nevertheless, nearly 40% of national level PPPs are also small. This suggests that targeting SSPPP support exclusively to sub-national bodies risks excluding a significant proportion of smaller national-level projects that: i) may need support; and ii) could generate significant benefits.

Table 5 PPI by size and contract term, 1994-2018 cross-section

Contract term (years)	All Projects		Below USD50m		Above USD50m	
	# of Projects	Investment (USDm)	# of Projects	Investment (USDm)	# of Projects	Investment (USDm)
0 to 5	84	3,075	68	1,077	16	1,998
6 to 10	155	19,707	90	1,355	65	18,352
11 to 15	410	58,257	178	3,279	232	54,978
16 to 20	868	164,595	313	6,674	555	157,921
21-25	914	313,469	336	6,525	578	306,945
26 to 30	1,836	403,374	754	15,780	1,082	387,595
over 30	686	206,215	234	4,898	452	201,316
n.a.	2,361	136,099	1,089	22,439	1,272	501,832
grand total	7,314	1,692,964	3,062	62,027	4,252	1,630,936
% of total						
0 to 5	1%	0%	2%	2%	0%	0%
6 to 10	2%	1%	3%	2%	2%	1%
11 to 15	6%	3%	6%	5%	5%	3%
16 to 20	12%	10%	10%	11%	13%	10%
21-25	12%	19%	11%	11%	14%	19%
26 to 30	25%	24%	25%	25%	25%	24%
over 30	9%	12%	8%	8%	11%	12%
n.a.	32%	8%	36%	36%	30%	31%
grand total	100%	100%	100%	100%	100%	100%

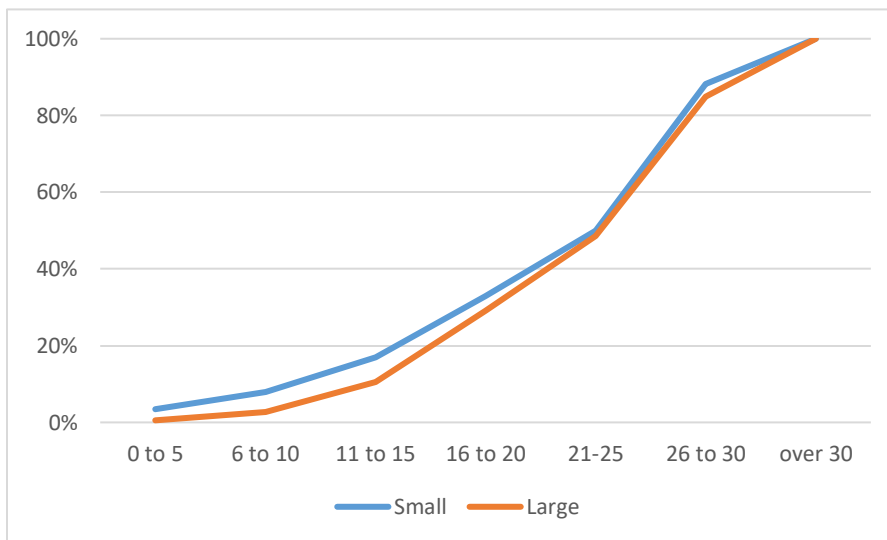
Table 5 presents the PPI data by contract term. A priori, SSPPP contracts might be expected to be shorter, either because they have a smaller capex element, or because smaller loans can be paid off more quickly without unduly impacting on affordability. The data somewhat supports this proposition: 11% of SSPPPs have terms of 15 years or less compared to 7% of large projects. Besides, only 8% of SSPPPs have terms longer than 30 years compared to 11% of larger projects. 27% of larger projects have terms between 16 and 25 years compared to 21% of SSPPPs. However, 25% of both large and small projects have terms between 26 and 30 years. This is illustrated in Figure 14 and Figure 15.

Figure 14 PPI by size and contract term, 1994-2018 cross-section (number of projects)



Up to 10 years, there are more SSPPPs than larger projects, even though there are fewer altogether (1,973 vs 2,980 larger projects). Beyond 10 years, larger projects dominate every category. The cumulative analysis (Figure 15) shows that SSPPPs are more weighted toward the shorter term, with larger projects “catching up” in the 20-25 year slot.

Figure 15 PPI by size and contract term, 1994-2018 cross-section (cumulative %)



Above 25 years, there is slight difference between small and large. This suggests that, while SSPPPs are more likely to use shorter term contracts than larger PPPs. There is also no inherent obstacle to longer term SSPPP contracts if the specifics of the project support such timeframes⁷.

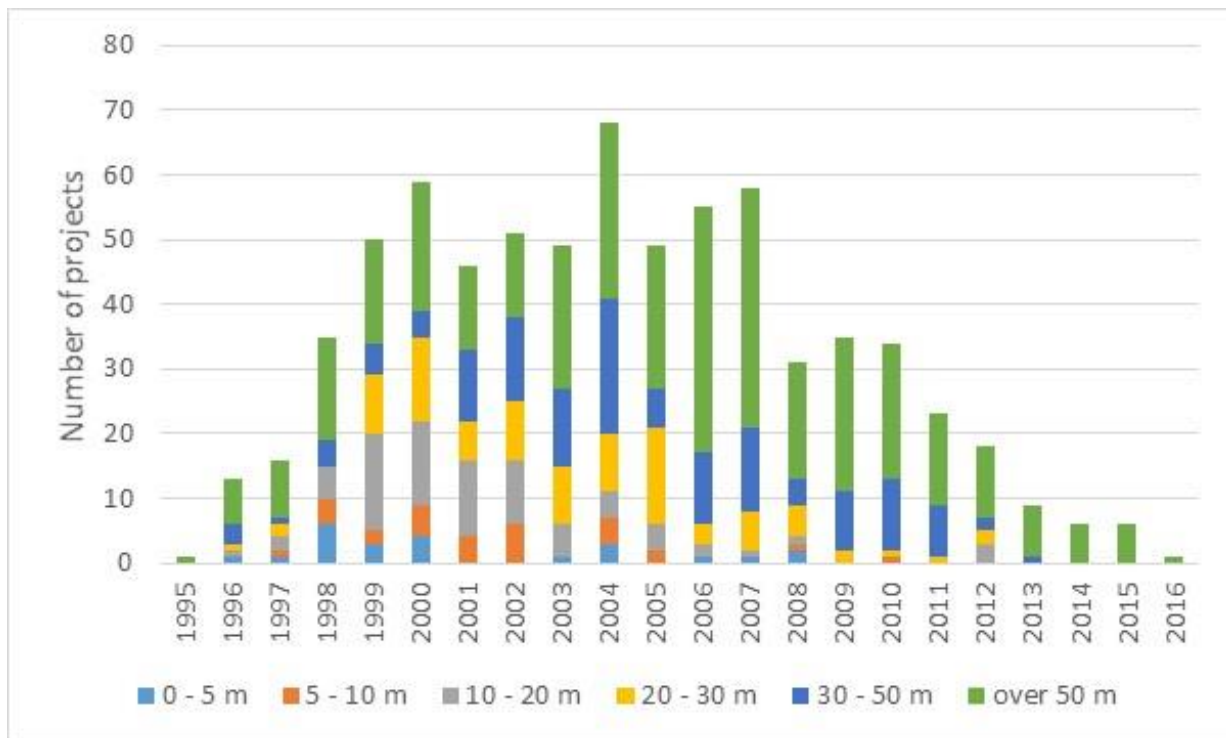
⁷ An alternative explanation might be that sub-national Procuring Authorities, being less experienced, are more likely to agree contracts that are longer than necessary. If final contract terms for SSPPPs are consistently longer than the what was expected at the time the RFP was issued, that would tend to support this “poor negotiator” argument. It is not possible to test this using the data currently available.

2.3.2 UK PFI

The UKPFI database includes 715 projects that reached financial close between 1990 and 2017, of which, 363 had a total investment of USD50m or below. Various time series and cross-section tabulations of the data are included in Appendix 4.

Figure 16 below presents the UKPFI data as a time series, showing the number of large and small projects reaching financial close each year. The data for small projects was further disaggregated to identify whether there are any major differences within the USD0 – 50m category.

Figure 16 Trends in UKPFI by size 1995-2016



The data shows three peaks, in 2000, 2004 and 2007, then a long tail off. In November 2018, the UK government announced the end of the PFI program. In general, the number of small PPPs has moved in line with the market but with a more pronounced decline after 2012. No PPPs with capex below USD50m have closed since 2013 and below USD30m since 2012. This reflects a 2010 policy change that excluded projects below GBP20m (USD29m) from the PFI program. Small projects closing in 2010 and 2011 would have been started before the policy change.

Figure 17 Trends in small UKPFI, 1995-2016

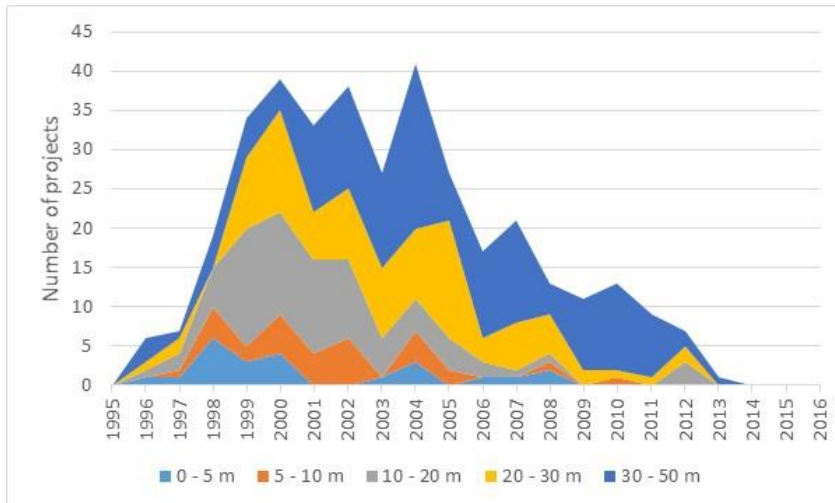


Figure 17 provides more detail on trends in the number of SSPPPs. The peak period for closing PPPs was 1999-2004. There was a rapid decline thereafter, despite slight recoveries in 2007 and 2010. The decline was most pronounced in the smallest bands (below USD10m).

Figure 18 Shares of small and large UKPFI by number of projects, 1995-2017

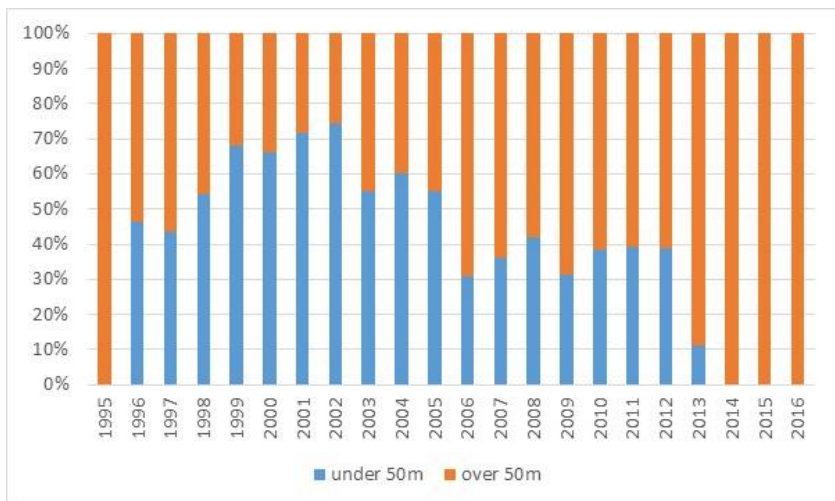
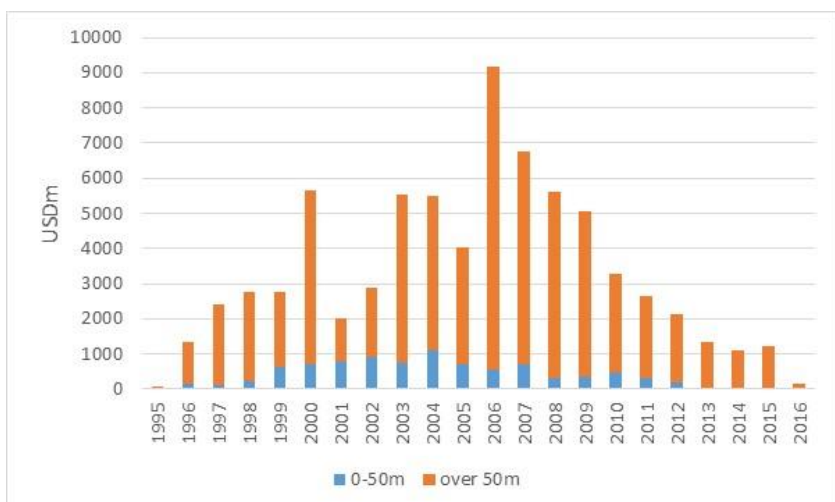


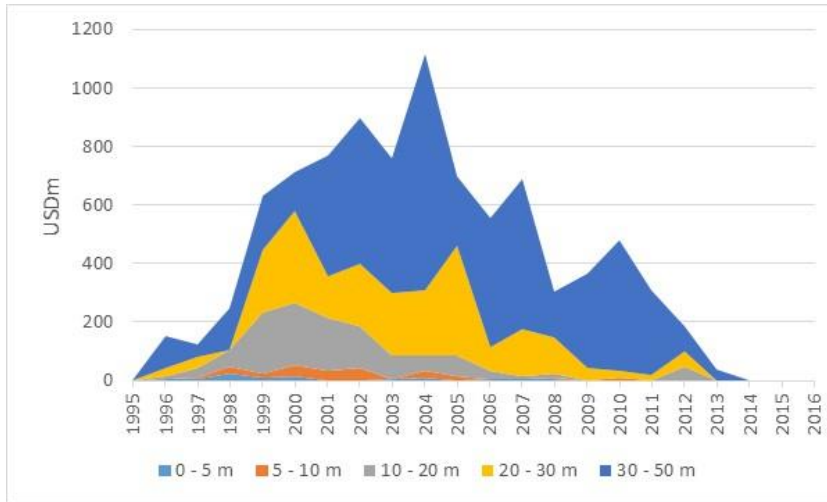
Figure 18 shows that during the peak years of the program (1998-2005), SSPPPs made up more than half of all projects closed. From 2006 – 2012, their share fell to around 30-40% and then to 10% in 2013, with no small projects closing thereafter.

Figure 19 Total investment in small and large UKPFI 1995-2016



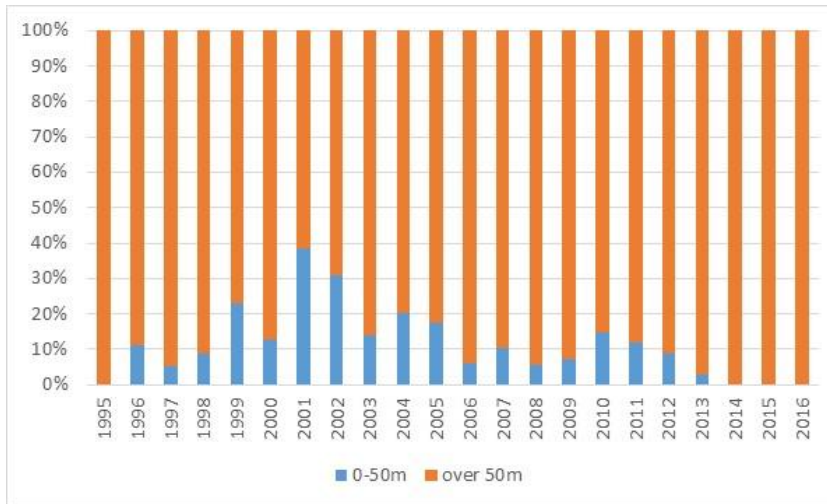
As might be expected, Figure 19 shows that by value, larger UKPFIs have consistently dominated smaller.

Figure 20 Investment in small UKPFI 1995-2016



Disaggregating the small PPP category, Figure 20 shows a rapid decline in the smaller categories (below USD20m) from an early stage, after 2000, even when the larger categories (USD20m to USD50m) showed some recovery.

Figure 21 Split between small and large UKPFI by value 1995-2016



Large PPPs consistently contributed the largest share of investment, the contrast with PPI database is noteworthy. In the global PPI data, the peak investment share for SSPPPs was 10% and it was achieved in only one year (2002). By contrast, in the UKPFI program, SSPPPs contributed 10% or more to total investment on 11 occasions, in two of which the contribution exceeded 30%.

The difference between the PPI and UK data could be explained by sectoral differences. The PPI database includes only economic infrastructure, while the UKPFI program focused on social infrastructure projects which tend to be smaller on average. The average size of all UKPFI projects over the period is USD104m. Within this, however, the average size of economic infrastructure projects was USD215m while that of social infrastructure projects was USD90m. Similarly, the average size of projects in the PPI database (which only includes economic infrastructure) over the period was USD232m.

This would support the proposition that because of its sectoral emphasis, the PPI database understates the importance of SSPPPs by excluding social infrastructure.

Figure 22 Small UKPFI by sector 1995-2016 cross-section

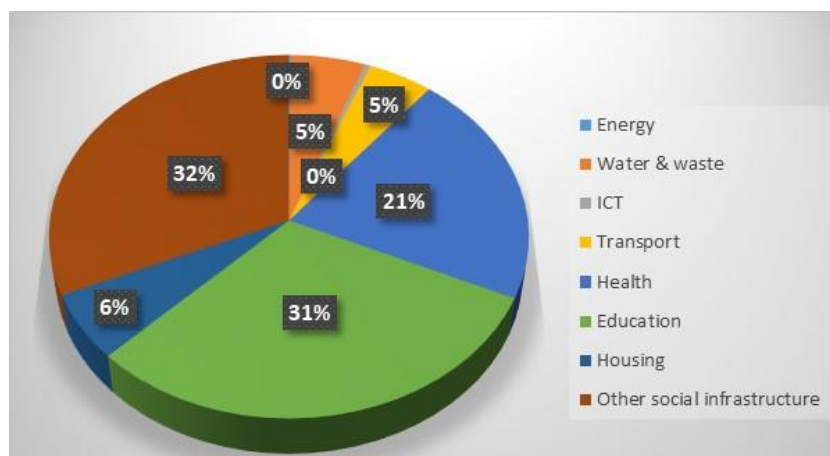


Figure 22 shows the breakdown by sector of the UKPFI program. Health, education and other social infrastructure (including law and order, housing and leisure) make up 90% of all SSPPP projects, only 10% were for economic infrastructure. The relatively low contribution of economic infrastructure in the UKPFI program can be explained by the successful UK privatization

program that started in the 1980s. The ICT, energy, water/sewerage and transport sectors were taken permanently into the private sector, which took over responsibility for infrastructure investment.

Table 6 shows the split between national and sub-national project sponsors. 85% of all projects were procured by sub-national authorities and this rises to 90% for SSPPPs, thus supporting the proposition that sub-national entities are more likely to have smaller projects.

Table 6 UKPFI by size and type of Procuring Authority, 1995-2016 cross-section

Procuring Authority	All projects		Below USD50m		Above USD50m	
	# of projects	Investment (USDm)	# of projects	Investment (USDm)	# of projects	Investment (USDm)
National	74	19,058	22	465	52	18,593
Sub-national	641	55,351	341	8,573	300	46,778
Grand Total	715	74,410	363	9,039	352	65,371
% of total						
National	10%	26%	6%	5%	15%	28%
Sub-national	90%	74%	94%	95%	85%	72%
Grand Total	100%	100%	100%	100%	100%	100%

Table 7 shows the distribution of UKPFIs by contract duration. It is inconclusive as to whether SSPPPs are more likely to use shorter term contracts. The data shows that only 3% of SSPPPs (by number of projects) have terms below 20 years and none of these are less than 10 years.

Table 7 UKPFI by size and contract duration, 1995-2016 cross-section

Contract period (years)	All projects		Below USD50m		Above USD50m	
	# of projects	Investment (USDm)	# of projects	Investment (USDm)	# of projects	Investment (USDm)
0 to 5	-	-	-	-	-	-
6 to 10	1	284	-	-	1	284
11 to 15	10	684	5	104	5	580
16 to 20	24	7,143	9	157	15	6,986
21 to 25	268	20,511	155	3,902	113	16,609
26 to 30	264	20,874	145	3,474	119	17,400
Over 30	148	24,914	49	1,402	99	23,512
Grand Total	715	74,410	363	9,039	352	65,371
% of total						
0 to 5	0%	0%	0%	0%	0%	0%
6 to 10	0%	0%	0%	0%	0%	0%
11 to 15	1%	1%	1%	1%	1%	1%
16 to 20	3%	10%	2%	2%	4%	11%
21 to 25	37%	28%	43%	43%	32%	25%
26 to 30	37%	28%	40%	38%	34%	27%
Over 30	21%	33%	13%	16%	28%	36%
Grand Total	100%	100%	100%	100%	100%	100%

For longer term contracts, the distribution is similar for small and large projects. Most SSPPPs (83%) have terms between 20 and 30 years. For larger projects, 66% fall between 20 and 30 years, significantly less than for SSPPPs. However, 28% of larger projects have contracts lasting longer than 30 years, compared to 13% (49 projects) of SSPPPs. The distribution of small and large projects by contract term is illustrated in Figure 23.

Figure 23 UKPFI by size and contract term, 1995-2016 cross-section (number of projects)

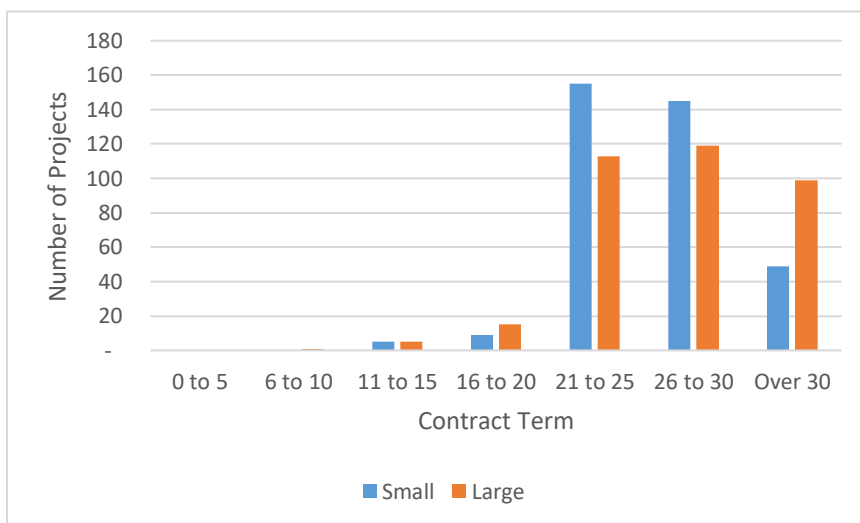


Figure 23 shows that the peak duration for SSPPPs is 21-25 years. For contract durations above 30 years, the number of projects drops off dramatically. For larger projects, the peak lies between 25 and 30 years and the drop off is less marked.

This provides some support for the “smaller is shorter” proposition only at the upper

end of the scale, that is, for contract terms longer than 20 years.

2.3.3 Case Studies – Cross-cutting analysis

Table 8 below presents cross-cutting information on 26 SSPPPs from 11 countries⁸. The sample includes developing countries (Chile, Bhutan, India, Philippines) and more developed countries (France, Korea, Poland). The information includes: sector, size (capex), PPP structure, contract term, type of sponsoring authority, structure of the SPV (local vs international investors), project needs and outcomes. Projects are listed by capex, from largest to smallest.

⁸ This includes the 10 case studies used in the 2014 World Bank paper on SSPPPs (A Ahmad, 2014)

Table 8 Cross-cutting analysis

Country	Project	Sector	Size (USDm)	Structure	Term (years)	PA	Investor (local:int)	Need	Outcomes	Ref
Kenya	Kenyatta University Students Hostel	Housing	50	DBFOT	30	university	both	Provide 10,000 units of good quality accommodation to students below market rents	Retendered after conflict of interest found during 1st tender	(A Ahmad, 2014)
France	Biarritz Cité de L'Océan	Urban	46	DBFM	30	municipal	0:1	Stimulate tourism beyond Summer peak by building marine museum/research facility	Significant losses, demand over-estimated by 35%; after 7 years legal action the Courts cancelled the project	(DG for Internal Policies, 2017)
India	Kakinada Deep Water Port	Transport	46	BOT	30	state	1:3	Expand port capacity; improve operations	In 5 years cargo increased by 150%; all vessels by 576%; cargo vessels by 249%; revenue for govt	(Ministry of Finance, 2010)
India	Tuni Anakapalli Annuity Road	Transport	44	BOT (annuity)	n.a.	national	1:0	Increase highway capacity from 2 - 4 lanes without toll	govt-pays by fixed annuity; construction cost below estimate	(Ministry of Finance, 2010)
India	Bhiwandi Electricity Distribution Franchisee	Electricity	44	O&M/ franchise	10	state	1:0	Help address power deficit by improving energy management; improve revenue collections	In 2 years technical and commercial losses fell 34%; transformer failures from 40% to 7.5%; load shedding from 6 to 3.5 hours/day	(Ministry of Finance, 2010)
Philippines	Automated fare System, Manila	Transport	38	Con-cession	10	national	2:0	More efficient fare collection; reduce fraud; demand management	Successful tender	(MacDonagh, 2016)
Poland	Sopot Railway Station	Transport	30	DBFO	8	municipal	0:1	Redevelopment of urban space in a tourist destination	Delivered on time and on budget; but commercial rental income below forecast	(DG for Internal Policies, 2017)
India	Timarpur Okhla Integrated Solid Waste Mgt.	Waste	28	DBFOM	25	municipal	0:1	Increase landfill capacity for Delhi; manufacture fuel, electricity, recycled water	Successful tender	(Ministry of Finance, 2010)

Country	Project	Sector	Size (USDm)	Structure	Term (years)	PA	Investor (local:int)	Need	Outcomes	Ref
India	Provision of Urban Amenities	Urban	25	Con-cession	13	municipal	2:0	Provision of infrastructure & services, including roads, waste mgt., cold store	13 month delay before 1st projects, long approval process	(A Ahmad, 2014)
India	Vadodara Halol Toll Road	Transport	23	DBFOM	30	state	0:1	Increase highway capacity to Halol industrial town from 2 - 4 lanes	Construction completed early and nearly 10% below estimated cost	(Ministry of Finance, 2010)
India	Latur Water Supply	Water	20	Mgt contract	10	municipal	3:0	Water scarcity; population growth; lack of operating capacity at the municipality	Successful tender; 100% metering improved revenues; network optimization	(Ministry of Finance, 2010)
Chile	Center for vehicles removed from circulation	Transport	19	Con-cession	25	municipal	1:0	Centralized facility; economies of scale; save police time	Successful tender	(APEC, 2014)
India	Karnataka Urban Water Supply	Water	14	DBFOM	5	municipal	0:1	Rehabilitate and expand the water network to provide 24x7 service	Service increased from 3 hours to 24; public standpipes eliminated; 25,000 new connections	(Ministry of Finance, 2010)
India	Salt Lake Water & Sewerage	Water	10	DBFOM	30	municipal	2:0	Support development of IT hub; prevent illegal groundwater extraction	Construction delayed due to land hand-over issues	(Ministry of Finance, 2010)
India	Berhampur Solid Waste	Waste	10	BOT	20	municipal	1:0	Collection, disposal of waste; construction, operation of composting facility; closing existing dump site	Annual GHG emissions savings of 16,000 tons	(A Ahmad, 2014)
India	Gandhinagar Rooftop Solar	Electricity	9	BOO	25	state	2:0	Install PV panels on rooftops & connect to grid	Lack of policy framework, multiple contracts needed eg with building owners	(A Ahmad, 2014)
Bhutan	Thimphu Parking	Transport	8	DBFOT	22	municipal	2:1	Congestion; facilitate urban transport	550 new spaces; \$230k revenue share; improved traffic flow	(IFC, 2017)
S. Korea	Anwha High School	Education	8	BTL	20	national	n.a.	Reduce overcrowding; improve conditions; replace unsuccessful BTO model	Estimated saving of \$2m over project life; "school of the year" 2007	(Kim, 2011)

Country	Project	Sector	Size (USDm)	Structure	Term (years)	PA	Investor (local:int)	Need	Outcomes	Ref
India	Punjab Grain Silo	Agri-culture	7	BOO	30	SoE	1:0	4 silos of 12,500 MT each to store government grain	govt saved \$6m due to reduction in wastage and retention of grain quality	(A Ahmad, 2014)
India	Radiology Services Andhra Pradesh	Health	7	BOOT	7	state	2:0	Build/upgrade/operate radiology facilities in 4 teaching hospitals	Double number of patients with same budget, tariff 50% of market - market prices fell, waiting time reduced	(A Ahmad, 2014)
India	Alandur Sewerage	Water	6	BOT+lease	5+14	municipal	1:0	Unregulated sewage disposal; health concerns	Eliminated mosquitos, groundwater contamination; fiscal discipline	(Ministry of Finance, 2010)
India	Street Lighting Bhubaneswar	Urban	5	O&M	10	municipal	2:0	Finance and install lighting, operate and maintain	Lack of appetite from local lenders - had to be funded from equity	(A Ahmad, 2014)
South Africa	Cape Nature Tourism Project,	Tourism	4	Con-cession	30	regional	1:0	Design, refurbish, build, finance and operate tourism facilities	n.a.	(A Ahmad, 2014)
India	Amritsar Inter-city Bus Terminal	Transport	3	DBFOM	11	national, state	3:0	Increase capacity, rehabilitate existing site	New terminal; lease income to government; better facilities for passengers	(Ministry of Finance, 2010)
Palestine	Solid Waste Project	Waste	0	O&M	5+2	sub-national	0:1	Build & operate landfill & waste transfer stations to serve several villages	Lack of expertise & financing; needed help from World Bank & others	(A Ahmad, 2014)
Lesotho	Health Care Waste Management	Waste	0	Mgt contract	1+1+0.75	national	2:1	Waste collection, operation of incinerators at 2 hospitals & 15 primary health facilities	Reduced disposal of medical waste on general landfill sites	(A Ahmad, 2014)

A review of Table 8 suggests the following:

- Based on the outcomes, a qualitative assessment⁹ suggests that 14 of the projects were successful, 5 were unsuccessful and 7 were inconclusive or insufficient information was available to make a judgement. This demonstrates that SSPPPs are not inherently doomed to fail. Given the small data set¹⁰, a degree of caution is necessary, however.
- The data set extends across 7 different sectors. The most common sectors were transport (8 projects) and water & waste (8), followed by urban infrastructure (3), electricity (2), and tourism, housing, health, education and agriculture (1 each). Thus, 22 of the 26 SSPPPs in the sample were in economic infrastructure sectors and only 4 were in social infrastructure. This data does not support the argument that economic infrastructure PPPs must be large scale in order to be successful or that SSPPPs are more suitable for social infrastructure projects than for economic infrastructure.
- All but 2 of the projects in the sample included some capex, with amounts ranging from USD3m to USD50m.
- All but one project (Biarritz Cité de L’Ocean) in the sample involved operation by the private partner. 21 of these projects used DBFOM/BOT/Concession structures¹¹ which are probably the most common structure for all infrastructure PPPs. 3 projects used O&M and 2 projects used management contracts. This suggests that there are no material limitations on the type of structures that can be used for SSPPPs which involve infrastructure investment.
- As regards the term of the contracts, 10 projects were for durations of 10 years or less (although one of these, Alandur Sewerage, was extended by a further 15 years after its initial 5 year term expired), 13 projects were for 20 years or more (7 of these were for 30 years), with 2 projects between 11 and 19 years. This data may provide some support for the argument that SSPPPs may be shorter than larger projects. However, there do not seem to be any material obstacles to setting longer terms.
- The case studies support the proposition that SSPPPs are more likely to be used at sub-national level. The national government was the PA in only 5 of the sample projects (one of which was in co-operation with a state government), 6 were sponsored by state or regional governments alone and 12 were sponsored by Municipalities. 3 others were sponsored by other types of sub-national entity, including a university and a state-owned enterprise.
- A priori, it would be expected that smaller projects may require fewer private partners and would be more attractive to local investors as they are less complex and require less financing. The data provides some support for this observation: 13 projects had only 1 investor rather than a consortium (for 7 of these projects the investor was local and in the other 6, foreign). Nevertheless, 5 of the 26 projects had 3 or more investors.
- It seems that local investors are more attracted to PSPPPs. However, there is no solid support for the argument that the returns would be too small to attract foreign investors. 15 of the 26

⁹ A full quantitative analysis would require information on VfM for each project, as estimated before the tender and actual after completion. This was not cited in any of the case studies used in this analysis.

¹⁰ And a potential bias towards selecting only successful projects for case studies.

¹¹ Different countries use different terminology to describe what is effectively the same structure, where the private partner designs, builds, finances, operates and maintains the project during the contract life, then hands it over to the public authority.

projects were won by local investors or consortia, 6 were foreign only and 4 included both local and foreign parties.

Overall, some of the a priori propositions are supported by the case study data. In particular, the case studies suggest that SSPPPs are more likely to be sponsored by sub-national entities, and they may be more attractive to local investors. Others are not supported: specifically the proposals that SSPPPs are less likely to be successful, that economic infrastructure projects are less likely to be suitable for SSPPPs and that international investors would not be interested. It is less clear whether SSPPP contracts are likely to be shorter than larger projects as the sample included both relatively short contracts (as would be expected, this includes the services-only projects) and quite long-term ones. There were only 2 projects between 11 and 19 years. This suggests that the mechanism for determining contract terms incorporates more considerations than just project size/asset life.

2.4 Key Findings

Overall, there is conflicting evidence as to whether SSPPPs can generate sufficient VfM to outweigh the cost of preparation and the contract management costs associated with the PPP procurement approach. On the one hand, the quantitative analysis suggests that interest in SSPPPs has been declining in recent years. On the other hand, the majority of the SSPPP case studies provide examples of successful projects. However, there are caveats for both of these statements. The PPI database is likely to under-count SSPPPs since it only includes economic infrastructure projects. At the same time, the sample of case studies was quite small and may be self-selecting for success stories.

Table 2 (Section 2.1) set out a number of propositions about SSPPPs that were subsequently tested using three different data sets on small and large PPPs. Table 9 below indicates whether the analysis supported the propositions.

Table 9 Some Questions about SSPPPs ... and answers?

Issue	A priori view	Supported?
Are SSPPPs becoming more or less popular?	More popular	Not supported. The PPI database shows that SSPPPs have not matched the growth in larger projects and there has been a significant absolute and relative decline in the number of SSPPPs since 2005/2006.
Are SSPPPs more likely to be sponsored at national or sub-national level?	Sub-national	Supported. Both the PPI and the case study data found that sub-national authorities are more likely to sponsor SSPPPs.
Are certain sectors more suitable for SSPPPs?	Social infrastructure, urban transport, housing	Inconclusive. The PPI data excludes social infrastructure PPPs while the UK PFI program as a whole emphasizes social infrastructure PPPs. Transport, water and waste were the most common sectors in the case study data but the sample size is very small.
Are certain structures more suitable for SSPPPs?	Services, brownfield	Partially supported. The data for brownfield projects showed little difference between small and large PPPs; however, services PPPs tended to be smaller.

Are SSPPP contracts shorter or longer term than average?

Shorter

Partially supported. The PPI and case study data both show that shorter-term contracts are more likely to be for SSPPPs than for larger projects. However, there were also examples of SSPPPs with much longer terms, especially in the UKPFI program, suggesting that there is no inherent obstacle preventing a project involving investment below USD50m from having a term of 20+ years.

The data also suggests some interesting findings, in particular:

- SSPPPs appear to be most often used in the EAP and LAC regions. MENA has the smallest share, although this may be changing as there has been a significant increase in recent years;
- For brownfield projects, SSPPPs are more likely to use ROT structures;
- For privatizations, SSPPPs are more likely to involve 100% sale. This may be because they are less likely to involve core or strategic activities;
- There is partial support for the propositions that SSPPPs require fewer private partners and that they are more attractive to local investors. The data shows a partial support for the proposition that SSPPPs are unattractive to international investors.

As a note of caution, there are concerns about each of the data sets used for the analysis. In particular, the PPI database does not cover social sectors that are likely to be strong users of services structures (health, education) or that are likely to be attractive to municipal and local authorities (housing, for example). Using investment cost as a proxy for “size” is also likely to downplay the importance of services-only PPPs and of brownfield projects that use existing infrastructure. The UK data incorporates a similar bias, at least after 2010, when it became more difficult to gain approval for PPPs with an investment below GBP20m.

Conversely, the case study data provided numerous examples of successful SSPPPs. This suggests that measures to address key constraints facing SSPPPs may already have a foundation to build on, since there have been successes even without such support. These issues are explored further in Section 4.

3. Benefits and Risks of Small-Scale PPPs

This Section examines the arguments for and against SSPPPs and sets out the specific potential benefits that SSPPPs may bring, and their associated constraints and risks. Some of these, particularly the economic and social benefits, are difficult to quantify. As a result, they may be omitted or under-counted in the VfM analysis, which could lead to potentially beneficial projects being rejected.

For ease of analysis, these benefits and constraints are categorized according to the party most likely to be affected: project beneficiaries, investors and the PA.

3.1 Why do it? Potential benefits of SSPPPs

“Experience tells us that while large PPPs may be sometimes required, small PPPs can make a huge difference to people’s lives.” (Ahmad, 2016)

“The popularity of small-scale PPPs marks a paradox between literature and reality.” (Thierie, 2018)

“Projects in sectors like solid waste management, community/public toilets, water supply, energy-efficient street-lighting, primary health care, municipal parking, municipal parks and empty spaces, accommodation to students, and grain storage ..., if delivered well, can have a transformative effect on the lives of citizens.” (A Ahmad, 2014)

As suggested by the quote from (Thierie, 2018) above, there is a common view in the PPP literature and among PPP practitioners that high preparation and transaction costs make it difficult to justify undertaking SSPPPs. At the same time, as demonstrated in Section 2, SSPPPs are being tendered successfully, especially by regional and municipal authorities. Perhaps, the benefits are under-counted in the traditional VfM/business case calculations, since many of these benefits are difficult to measure quantitatively or are largely social in nature.

3.1.1 Potential benefits to end-users

The beneficiaries or end-users of SSPPPs are more likely to be concentrated in small communities in urban or rural areas. This drives a number of potential benefits, as described below.

Concentration/network effects: while there may be fewer beneficiaries than for national projects, these beneficiaries are more likely to be located in a much smaller area (cities, towns or rural communities). As such, the impacts may be more concentrated within the beneficiary communities.

Social benefits: tight-knit communities that interact frequently may be more likely to experience social benefits (e.g., from improved urban transport or rural electricity projects that provide better lighting). These tend to be more difficult to quantify than economic benefits.

Better projects: it has been argued (A Ahmad, 2014) that due to the localized nature of many SSPPPs are closer to end-users and are therefore more likely to be designed to address their specific needs. In practice this depends on how projects are identified and prepared – there is no guarantee that a municipal government will consult local residents or incorporate their views. As noted in Section 3.2 below, it is also possible that SSPPPs are more vulnerable to corruption or political influence.

Smaller scale, smaller charges for user-pays projects: as indicated in Section 2, the contract term for infrastructure SSPPPs may be similar to that of larger PPPs. This means that the smaller construction and

mobilization costs can still be spread over, say, 20-30 years. For user-pays PPPs, this reduces the amount to be recovered in each year, which should allow for lower user-tariffs.

3.1.2 Potential private sector benefits

Private Contractors, their suppliers and lenders may also benefit from SSPPPs.

More attractive to local firms: SSPPPs have smaller capex requirements and tend to be simpler and less likely to rely on new technology. This makes SSPPPs suitable for local firms, which may be smaller and less experienced in PPPs than large national and international players. Besides, the economics of smaller projects may be less attractive to international firms, thus reducing the potential competition to local Bidders.

More attractive to SMEs: for similar reasons, smaller projects will be more accessible to SMEs. In addition, since financing requirements are lower for SSPPPs, borrowing will be less of a constraint for SMEs than it would be on larger projects.

Potentially attractive to local banks: smaller projects put less capital at risk. On the other hand, local banks may be unfamiliar with PPP structures and may find that the loan administration costs are relatively high compared to large PPPs. If local banks are leading the financing, it is less likely that they can lay off the due diligence costs, as is usually the case for large projects that are financed by groups of international and local banks.

Forex risk lower: large PPP projects often include a significant hard currency component to pay for imported machinery, etc. As payments to the SPV are in local currency, this creates a forex risk. In the event of a currency depreciation, the Contractor will require more local currency to service its hard currency debt. SSPPPs generally have smaller hard currency requirements and are less exposed to exchange rate fluctuations or shortages of hard currency¹².

3.1.3 Potential public sector benefits

SSPPPs can generate specific benefits for the PA, especially municipalities or other sub-national entities.

Cost of failure lower: there is less at risk in terms of capital and reputation for small, localized projects. SSPPPs therefore provide an opportunity to gain practical experience in the complexities of PPP procurement in a lower cost, lower profile environment.

Affordability: individual SSPPPs are more affordable to the government, whether in terms of direct payments to the Contractor or guarantees. For government-pays projects, a longer contract term can be used to spread the capex cost over time, reducing annual payments. Longer terms for SSPPPs also result in less frequent re-tendering costs.

Replicability: the localized nature of SSPPPs means that there are opportunities to replicate successful projects in other locations. They are well-suited for a “pilot, then roll-out” strategy, where lessons and templates from the first project can be incorporated in subsequent iterations.

¹² In KSA forex risk is relatively low, since the SAR exchange rate is fixed to the USD and the rate has been unchanged for 33 years (R Alkhareif, 2016), while the country’s hard currency earnings for oil products mitigate the risk of hard currency shortages.

3.2 Justifiable Concerns? Constraints and Potential risks of SSPPPs

“Small-scale municipal PPPs suffer from lack of scale, lack of capacity and weak credit position.” (Global Platform for Sustainable Cities, 2017)

“Deals sized at less than €30m should be treated cautiously (they’re probably too small for PPPs and involve the same effort for low lending volumes).” (Bain, 2009)

“Small PPP projects may not make sense because of the relatively high transaction costs—although there is evidence of a few cases in which small PPPs have been successful.” (PPP Knowledge Lab, 2017)

There are constraints and risks associated with SSPPPs that larger projects may not face to the same extent. One of the key concerns is that the costs of preparing, procuring and managing PPPs do not vary significantly with the size of the project. There is still a need for thorough due diligence, comprehensive VfM analysis, a fair and transparent tender process, and subsequently for contract management. To the extent that contract terms may shorter for SSPPPs, these costs will also be incurred more frequently. SSPPPs are also more likely to include a significant services component and/or focus on social infrastructure (schools, clinics, government buildings, etc.). Revenue models for these types of project tend to be relatively complex and they typically involve monitoring a diverse set of KPIs to determine payments for the private Contractor.

3.2.1 Potential end-user implications

Compared to the benefits, the potential negative impacts are relatively few.

Affordability: the beneficiaries of SSPPPs in rural areas are more likely to be poor. User-pays projects that aim for full cost-recovery are less likely to be affordable to the poorest users. One way to mitigate this risk is to extend the contract term thereby spreading recovery of the initial investment cost over a longer period.

Disruption during construction: in urban areas the most likely negative impact is temporary, limited to the construction phase. This might include traffic congestion caused by heavy construction vehicles and road closures, as well as dust, noise and other environmental impacts. Many of these impacts can be mitigated by careful planning.

3.2.2 Potential private sector implications

Potential Contractors and lenders also face constraints.

Too small to attract experienced investors: bid participation costs can be significant for potential Contractors. International firms and larger local companies may view SSPPPs as too small to justify the cost and effort. As mentioned above, this does have a potential benefit in reducing the level of competition faced by smaller local firms.

Local Contractors, SMEs less experienced with PPPs: SSPPPs may provide more opportunities for local Contractors and SMEs, however, these firms are less likely to be experienced with PPP procurement. Since sub-national Procuring Authorities may also lack experience, this combination is more likely to result in failed projects.

Higher cost and reduced availability of financing: banks have an incentive to favor larger loans, for similar reasons to those of governments favoring larger PPPs: the costs of review, approval and administration

are not directly related to loan size, so the cost per unit borrowed will be higher for smaller loans. Banks may also prefer to lend to larger companies that are better known. For local banks in particular, loan officers are less likely to be familiar with PPPs and will price that additional perceived risk into the cost.

On larger PPPs, most of the preparation (due diligence, modelling, etc.) would be led by larger, more experienced (often international) banks. This allows smaller and/or local banks to participate with minimal effort. There are likely to be more banks involved, too, which spreads the project's risk over a number of lenders. These benefits are less likely to be available on SSPPPs since loan sizes are smaller and more likely to be fulfilled by a small number of local banks or even a single bank.

3.2.3 Potential public sector risks and constraints

The procuring authority is likely to face the greatest risks when it comes to SSPPPs. This is partly because SSPPPs are more likely to be procured by municipal and regional authorities, which face significant resource constraints.

Small PPPs cost almost the same as large ones to procure: As cited in (A Ahmad, 2014), *“The institutional structure for processing PPP projects from conception through development, appraisal, approval, and procurement stages is not suitable for small projects.”* Many of the costs of project preparation, procurement and monitoring are unrelated to the size of the project. Therefore, a smaller project will need to generate proportionally more VfM to counterbalance the larger fixed cost. Furthermore, PPP frameworks, institutions, governance and processes are usually designed for large national bodies. It is difficult and costly for sub-national organizations to comply with procedures designed for national level institutions implementing large scale projects.

There is also a risk of “reinventing the wheel”. Without central co-ordination, regions or municipalities may tender similar projects without learning from each other's experiences.

Staffing, know-how and experience: municipal authorities in particular are likely to have fewer, less experienced staff than their national counterparts, and those staff are likely to have fewer opportunities to gain experience by working on transactions. In addition, the staff that are available may have other responsibilities rather than being dedicated solely to PPPs.

Budget constraints: municipalities in particular face many calls on their budgets and limited scope to increase local revenues. This limits the number of Government-Pays PPP transactions that they can afford to undertake and may engender a bias towards user-pays projects. Municipalities often face financial constraints even on traditional procurement projects. The resulting reputation for persistent late payments will impact on the attractiveness of SSPPPs to potential Contractors. At best, the municipality will need to incorporate guarantees or other payment protection measures in the PPP contract (which will have a cost implication); otherwise, tenders may be unsuccessful. At worst, the PA will face legal action from Contractors to recover payments which may further damage its reputation and its ability to let future PPP contracts.

Credit profile and bankability: sub-national government bodies are likely to be viewed as a higher credit risk by lenders. Even if the loan is to the project SPV, banks will look to the parties behind the project. The value of a municipality guarantee, in terms of improving bankability, is significantly less than one from the national ministry of Finance. Reflecting this risk, commercial borrowing will be more expensive for sub-national PPPs than for national PPPs.

Local focus can lead to political influence: local government bodies are more likely to be influenced by local politics and potentially are more vulnerable to corruption. This will destroy VfM.

Higher cost rural projects: operating and maintenance costs can be higher for projects covering a large rural area or a remote settlement. This has a direct impact on government-pays projects but also affects affordability on user-pays PPPs.

Higher cost urban projects: urban areas are more densely populated and it should be easier to access users. However, costs can be higher for other reasons, such as traffic congestion, higher salaries for project staff, higher cost of land, more regulations to comply with, more costly designs (e.g., railways need to be elevated), and the need to compensate businesses for disruption during construction. Public opposition is easier to mobilize in an urban setting and negative publicity is more likely, which increases the need for public communication and consultation.

3.3 Key Findings

Based on the qualitative analysis presented in this Section, it appears that the additional benefits of SSPPPs largely accrue to the users, while the additional costs largely impact on the project sponsor (public sector). This would also be the case for any traditionally-sourced developmental project and should not necessarily be an argument for neglecting SSPPPs. The focus on traditional quantitative VfM calculations may undervalue the benefits and over-emphasize the costs to the PA, leading potentially beneficial SSPPPs to be rejected.

It is clear that there is no single aspect that drives down VfM in SSPPPs. Rather, it is a combination of factors, including procurement costs, capabilities of the PA, capabilities of private Contractors and bankability. This means that there is no “magic bullet” that will guarantee the viability of SSPPPs. The ideal solution will involve a combination of approaches to address different risks and constraints. This will be discussed further in Section 5.

4. Experience of other countries

A number of countries, including some of those with a minimum project size requirement, have put in place policies to support SSPPPs. Most of these address only one aspect of the constraints. For example, allowing projects to be bundled to meet a size hurdle is a way to spread some of the preparation costs. It is unlikely to have much impact on contract management costs or on the capabilities of the PA. The remainder of this Section assesses measures that were put in place by other countries to enable and support SSPPPs.

4.1 Specific Examples

Country	Singapore (Ministry of Finance, n.d.)
Initiative	Allows combinations of similar projects to achieve economies of scale and meet the USD50m minimum size hurdle. However, the bundle must still meet VfM requirements. Also <i>“Some projects less than \$50m can also be considered for PPP if the circumstances justify it.”</i>
Constraints addressed	Reduces average preparation and tendering costs by spreading the fixed component over more projects. In practice, similar projects will be able to use similar structures and contracts, and can be tendered at the same time. It is not clear whether the bundle is retained for the actual tender (i.e., whether it will be marketed as a single project). If this is the case, the larger scale could be more attractive to international bidders and potentially lenders.
Comments	In practice, projects can be combined by prospective sponsors just to meet the hurdle value, regardless of whether the combination is actually justified on VfM grounds. Singapore is a small country and MOF should be able to regulate the system without too much difficulty. This may not be the case in a larger country with many sub-national government bodies.

Country	Australia, Victoria state (Partnerships Victoria, 2013)
Initiative	Allows bundling of projects to meet the hurdle of AUD50m investment in capital goods. In 2013, Partnerships Victoria indicated that it was <i>“developing a streamlined model for smaller scale projects”</i> , starting by identifying suitable pilot projects.
Constraints addressed	Bundling will spread some of the preparation, structuring and tender costs over a larger base. It is not clear whether the bundle will subsequently be marketed as a single project for a single Contractor. In doing so, it will be more attractive to larger investors and potentially lenders. The plan to develop a streamlined procurement model targets tendering costs (for bidders as well as for Partnerships Victoria).
Comments	Projects could be combined just to meet the hurdle value. Requiring companies to bid for the entire bundle rather than individual components will make it more difficult for smaller companies to bid.

Country	UK (HM Treasury, 2003) (HM Treasury, 2011)
----------------	---

Initiative	<p>Policy towards SSPPPs has changed during the course of the PFI program. Initially, no distinction was made on the basis of project size. This began to change in 2003, when HM Treasury noted that <i>“Whilst PFI’s record of performance has been similarly good for major schemes and for projects with a capital value of less than £20 million, there is however also evidence that smaller projects face a number of difficulties that need to be addressed to ensure that this success is not obtained at disproportionate cost.”</i> (HM Treasury, 2003) At that time, the solution adopted was to reduce preparation and tendering costs for the program as a whole.</p> <p>The 2003 document introduced a number of measures to increase VfM for all PFIs, primarily by reducing procurement timescales and costs. These would apply equally well to SSPPPs. The measures included:</p> <ul style="list-style-type: none"> • Improve public sector procurement skills; • “Rigorously enforce” standardization of PPP contracts; • Enhance monitoring of procurement by local authorities; • Increase national government support for standardization and capacity building. • Accreditation of advisors; • Sharing best practice in procurement across the public sector. <p>In 2010, the House of Commons Treasury Committee concluded that <i>“Our further recommendations for reducing the cost of procurement are to...avoid the use of PFI for smaller projects where the transaction costs of PFI do not represent value for money. It needs to be considered case by case, but as a ballpark figure we think PFI should be avoided for projects of less than £20 million.”</i> (HM Treasury, 2011). A minimum hurdle to qualify for PFI was introduced and set at GBP20m (USD26m) investment cost. Projects could be bundled together to meet the hurdle value provided that this was justified in terms of VfM.</p>
Constraints addressed	<p>A more holistic package, although the emphasis remained on reducing procurement costs and time. The general measures could presumably also extend to capacity building in contract management.</p>
Comments	<p>The adoption of a minimum size hurdle in 2010 suggests that the 2003 reforms to reduce procurement costs were insufficient to ensure the viability of smaller projects. The GBP20m hurdle effectively closed the PFI option to smaller projects, as shown by the data presented in Section 2.3.2.</p>

Country	Lithuania (PPP Association Lithuania, Invest Lithuania, 2018)
Initiative	<p>Lithuania is a relatively small country (population 2.8 million). Projects even at national level are likely to be relatively small. Parliamentary approval is required for projects where state liabilities exceed EUR58m (USD66m).</p> <p>The approval process for local authority-sponsored projects is significantly more complex than those sponsored by national government. Specifically, there are 4 more decision points than for national level projects, since the main approvals need to be granted by both national and local institutions. This additional oversight may reflect the country’s early experience with small, local government PPPs where a lack of long term planning and market consultation led to <i>“the creation of albeit eye-catching, sub-</i></p>

	<i>optimal and commercially unattractive infrastructure which led to several unsuccessful tenders.” (PPP Association Lithuania, Invest Lithuania, 2018)</i>
Constraints addressed	Appears to address the procurement and structuring capacity constraints of local authorities, by increasing oversight and regulation by national government.
Comments	Presumably driven by negative past experiences with local authority sponsored PPPs; however, the additional level of governance and approval may increase procurement costs and timing ¹³ . This may deter local authorities and potential Contractors from the PPP market.

Country	The Netherlands (F. Hobma, 2006)
Initiative	Proposes an “Alliance Model” for SSPPPs as an alternative to the more typical Concession approach. This involves joint responsibility and control with the two parties sharing responsibility for resource inputs, risks and rewards. The PPP contract is a Co-operation Agreement rather than a Concession Agreement. Most examples are for inner city development projects. <i>“Trust’ is an important condition for success...An alliance is a joint venture. It is not about dividing responsibilities and risks, but about sharing responsibilities and risks. In a sense it is real partnership.”</i> The example cited in the paper, Haarlemmermeer Recreation Puddle Pool, was awarded by direct negotiation rather than competitive tender.
Constraints addressed	Enhances the capacity of local authority sponsors to develop, tender and manage PPP contracts by sharing these responsibilities with private partners.
Comments	An innovative approach to address constraints faced by local authority project sponsors. Its success relies on the “trust” element between the two parties and pre-supposes that the private Contractor is sufficiently experienced to compensate for the local authority’s constraints. In emerging markets, this may not be the case.

Country	Fiji (D. Marett, 2018)
Initiative	This initiative has a very narrow focus, in supporting small-scale off-grid renewable energy electricity systems. To qualify for the support measures, the system must have at least 25 users and no connection to the national electricity grid. The PPP framework for these projects is in line with best practices for larger PPP projects, with requirements for market consultation, competitive tender, and establishment of a SPV. There are templates for key documents (including the main PPP contract) and a methodology for calculating tariffs.
Constraints addressed	The framework makes it easier for local authorities to run PPP tenders for small renewable energy power projects by providing a clear process to follow, along with all the necessary documentation.

¹³ The document mentions that a typical national level PPP takes 1.5 to 2 years to complete (including preparation time). Adding an additional layer of decision making, especially for relatively inexperienced local authorities, is likely to extend that significantly. It is questionable whether most potential private Contractors would have the patience for such an extended process.

Comments	There are several examples of frameworks and toolkits for SSPPPs, primarily for electricity and water projects in rural areas (see also (Delmon, 2014)). The Fiji example illustrates the difficulty of balancing the need for a professional, safe, affordable utility in a remote area against the risk of raising the costs of participating to potential Contractors and for the PA. The tender process is similar to one that would be used for a much larger project. The tariff is not governed by national regulations. This should support commercial viability of the project by allowing a cost-based tariff to be established for each project, with the caveat that the tariff must be affordable to users.
-----------------	--

Country	Greece (Karaiskou, 2007) (S Kyvelou, 2011)
Initiative	The “Thisseas” scheme was established in 2004 to strengthen local authorities. One significant component is designed to support local level PPPs. It includes funding for the preparation of masterplans, for legal and technical advisors and in some cases, for local authorities’ financial obligations from PPP contracts. As of May 2007, the scheme had supported 136 projects with an average value of around EUR13m (USD15m). By 2011 a total of 171 projects had been approved. These covered economic and social infrastructure, including tourism, environment, energy, parking, real estate, industrial parks, marinas and sports.
Constraints addressed	Thisseas addresses the capabilities of local authorities to plan, prepare and tender PPPs by funding masterplans and transaction advisors. It can also improve bankability by funding the authorities’ financial obligations under PPP contracts.
Comments	Thisseas focuses on the project sponsors (local authorities) rather than the project itself. It enhances their ability to develop and tender PPP projects and provides budgetary support for ongoing financial obligations, which enhances bankability. The scheme does not appear to generate savings overall, rather, it transfers certain costs from local to national government. Nevertheless, the number of PPP projects approved is significant, suggesting that the program has had a material impact.

Country	Korea (Kim, 2011), (J Kim, 2011) (KDI, 2017) (World Bank, 2017)
Initiative	The Build-Transfer-Lease (BTL) PPP structure was introduced in 2005, primarily to facilitate SSPPPs, although it can also be used for larger projects. It is used for low risk, low return (IRR <3%) government-pays PPPs. Under BTL, the Contractor finances and builds the facility. On completion, ownership transfers to the PA, which makes fixed lease payments for the remainder of the contract term (20 years). Between 2005 and 2018, 452 PPPs using the BTL structure were closed, amounting to a total investment of USD23.6 billion (KRW28 trillion). Examples include Anwha High School (USD0.8m), Chungju Military Accommodation (USD16.3m) and Ulsan Institute of Science and Technology (USD219m).
Constraints addressed	Standardization reduces transaction costs to both parties, while the simplicity of the lease payment reduces contract management costs and enhances bankability. BTL also eliminates demand risk for the Contractor.
Comments	Although not designed solely for SSPPPs, BTL has been successful, particularly in school construction. The lease payment approach is simpler than the complex Unitary Charge

models often used for social infrastructure PPPs. The PA still monitors quality standards and has enforcement powers if they are not met but this is likely to be less intrusive and costly than the more complex requirement of the Unitary Charge.

Country	Worldwide (A Ahmad, 2014)
Initiative	<p>The 2014 World Bank study, A Preliminary Review of Trends on Small-Scale Public-Private Partnership Projects (A Ahmad, 2014), provided a comprehensive analysis of trends and issues in SSPPPs and developed a number of recommendations to address these issues. The recommendatoin can be summarized as follows:</p> <ul style="list-style-type: none"> • Institutional and policy framework: <ul style="list-style-type: none"> ○ Fast track development and approvals process; ○ Fast track payments process; ○ Standardize procurement and contract documentation; ○ Measure and manage fiscal and contingent liabilities at municipal and aggregate levels; ○ Harmonize upstream policy (e.g., whether small, local projects must meet the same regulatory requirements and tariff regulation as at the national level); ○ Improve monitoring and evaluation, contract management; • Analysis and reform of sectors that are most likely to have SSPPPs, such as urban amenities, tourism, provincial roads, urban roads, rooftop solar energy; • Support for financing: <ul style="list-style-type: none"> ○ Measures to improve bankability; ○ Guarantee instruments; ○ Specific funding vehicle for SSPPPs; ○ Capital market reforms to ease constraints particularly impacting SSPPPs, such as encouraging leasing and allowing investments by pension and insurance funds in PPPs.
Constraints addressed	A holistic package of recommendations that aim to address preparation and tendering costs, specific sectoral constraints and financing.
Comments	Although the focus of the research is on developing countries, much of the analysis and recommendations is applicable to other economies, especially those at the beginning of their PPP journey. The research in the current paper also sourced the PPI and UK PFI databases for part of the market analysis and included many of the recommendations of the World Bank paper in the toolkit for SSPPP support measures developed in Section 5.

4.2 Key Findings

The examples explored in this Section cover a wide range of options for addressing SSPPPs, from programs targeting specific types of project and technologies (Fiji), to those addressing the needs of specific project sponsors (Greece, The Netherlands) as well as holistic approaches that seek to mitigate a number of different types of risk (UK, World Bank). In balancing the need for speed and flexibility in the procurement

process against the desire to maintain central oversight and control, some countries may have inadvertently reduced the attractiveness of SSPPPs (Lithuania and possibly Fiji).

5. Addressing the Constraints – A Toolkit for Supporting SSPPPs

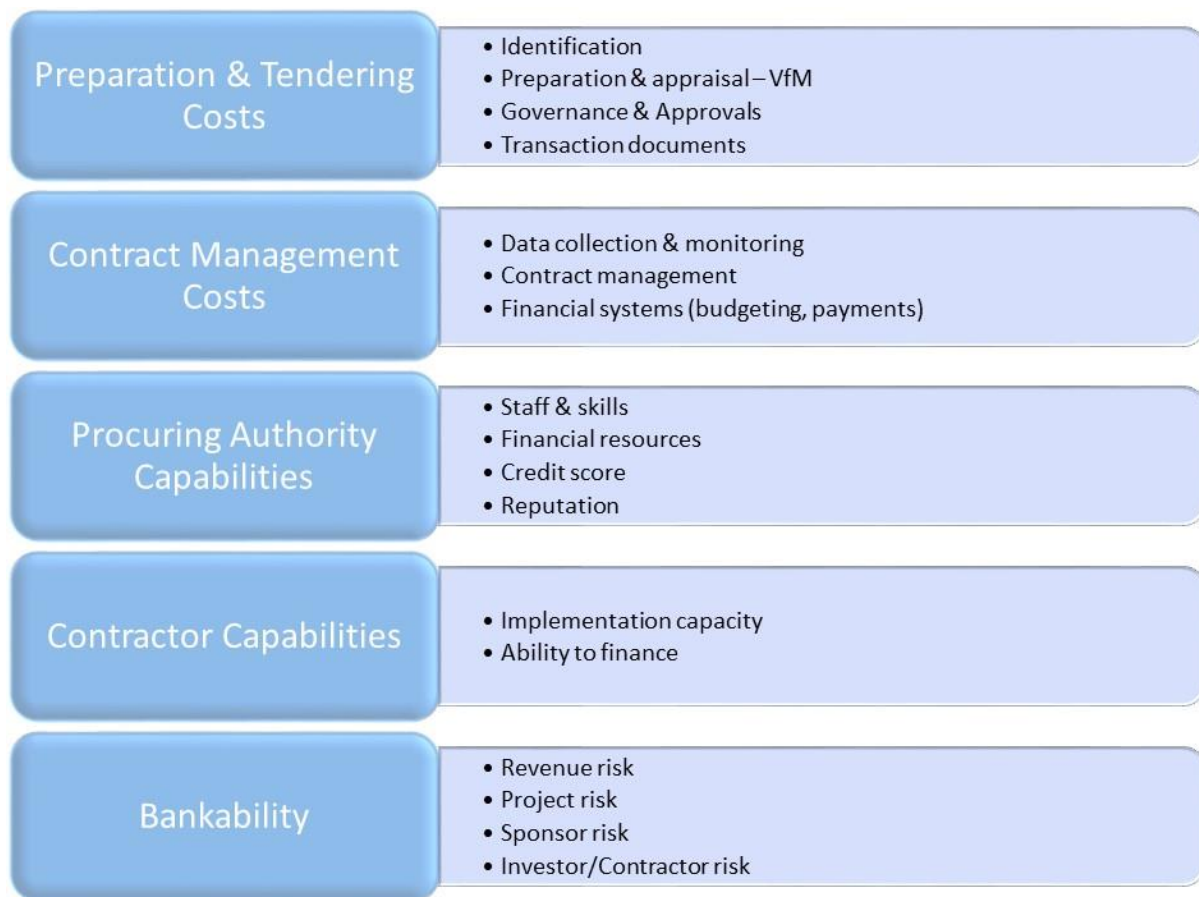
This section identifies and then develops more than 25 options for improving the viability of SSPPPs through addressing the constraints and risks identified in Section 3. It takes into account solutions suggested by the literature and policies that were adopted by other countries. The key feature of the proposed approach is that it is multidimensional in nature, aiming to construct a toolkit that can be used to address different aspects and types of risk to meet the needs of different situations and types of project. Many of the options are equally applicable to larger PPPs and can have a positive impact on the whole PPP program if implemented. Detailed descriptions of each measure are provided in Appendix 2.

5.1 Analytical framework

Despite a widely-held view that SSPPPs may be difficult to justify in terms of VfM, they are still being implemented. Clearly, there are specific constraints and risks that affect SSPPPs more than larger projects, yet the additional benefits appear to justify those risks, at least for some countries and projects.

In designing the SSPPP Toolkit, it is helpful to frame it as a package of measures designed to address specific types of constraint, as illustrated in Figure 24 below. To have the greatest chance of success, a pro-active policy to promote SSPPPs should address all of these dimensions.

Figure 24 A Multi-Dimensional Framework for Supporting SSPPPs



5.2 A better Measure of “Size”

Before considering specific policies and actions to support SSPPPs, it is worth considering how the “size” of PPPs is currently judged. This is a vital measure because the “size” can be used both to exclude certain projects from the PPP program and to include certain projects that are eligible for specific support.

In PPP terms “size” is best measured by VfM. VfM measures the total net benefit to society from completing the project as a PPP rather than using an alternative procurement method. In practice, VfM is a complex combination of quantitative and qualitative information, including economic costs and benefits, fiscal impact, commercial profitability and risk. It is usually estimated during the project preparation stage. Therefore, it is not a particularly useful tool for the initial screening of projects.

Given that the argument centers on a perception that SSPPPs do not generate enough VfM to compensate for the high preparation and management costs associated with PPP procurement, it is important to use a measure of size that is a good proxy for VfM. The most common indicator used to identify SSPPPs is the amount of capital expenditure involved. Although this is a convenient figure, and clearly associated with the size of a new infrastructure project, there are major disadvantages of this indicator in this context:

- It is a measure of cost (inputs) rather than benefits (outputs);
- It incorporates an implicit assumption that *more capex = more VfM*, which is not necessarily correct;
- It creates an inherent bias against services PPPs and brownfield/rehabilitation projects where capex requirements are lower.

One can identify different indicators of “size” of PPP projects that address these concerns to a greater or lesser extent. However, if such indicators are to be used to screen SSPPPs at an early stage, they must also satisfy practical considerations. Countries seeking to exclude certain projects need an indicator that is capable of determining whether a project justifies the additional cost and effort needed to prepare a full VfM analysis to support any decision to proceed with the tender. Countries with a more inclusive policy want to select “fast track” SSPPPs as early as possible. This combination of theory and practice allows us to identify criteria that can be used to test potential candidates for a better measure of project size. These are presented in the table below.

Table 10 Filtering criteria for measures of project size

Criterion	Explanation
Available early in the Project Cycle	Indicator used as part of the initial screening.
Ease of estimation	Indicator used as part of the initial screening.
No bias for/against certain types of PPP	Ensure fairness, minimize Type 1 (rejecting a good project) and Type 2 (accepting a bad project) errors. Avoid favoring a particular type of project (e.g., infrastructure, government-pays, projects with few beneficiaries)
Clear link to “size”	Non-experts should be able to understand and accept the measure.
Reasonable proxy for VfM	VfM is the fundamental determinant of whether a PPP procurement is justified. A full calculation can be costly and tends to come later in the process; therefore the

	measure of “size” should have a reasonable correlation with VfM.
Measures benefits/outputs rather than costs/inputs	It is the benefits that the project is designed to deliver, therefore the “size” of a project should measure the benefits it delivers rather than the costs it incurs.

A number of alternative measures of “size” can be identified. These are presented and discussed in the table below.

Table 11 Possible indicators of PPP “size”

Proposed Indicator	Explanation
Investment cost (capex)	The traditional measure, benchmark against which to compare other indicators.
Investment cost/beneficiary	Scaled by number of beneficiaries.
Life cycle cost (contract value)	Measures of cost should include operating costs as well as capex – the Contractor will minimize life cycle cost rather than capex or opex alone.
Life cycle cost/beneficiary	Scaled by number of beneficiaries.
VfM	Fundamental benchmark for PPP projects.
VfM/beneficiary	Scaled by number of beneficiaries.
Number of permanent jobs created	Measures economic and to some extent social benefits.
Number of beneficiaries	Measures breadth of the benefit.
Density of beneficiaries (people/area)	Measures concentration of benefits – to capture the view that small projects can make a big impact on the lives of beneficiaries.
Impact on GDP	Measures economic benefit.
Amount of government support needed	Lithuania example – measures fiscal burden (part of VfM).
National or sub-national sponsor	Greek example – only sub-national is eligible for the Thisseas program benefits. Measures concentration of benefits – to capture the view that local projects can make a big impact on the lives of beneficiaries.

Comparing these measures against how well they meet the criteria proposed above is one way to sort and rank them in terms of their usefulness as an early indicator of “size”. The assessment is necessarily qualitative¹⁴. Nevertheless, the qualitative assessment can at least provide some indication as to whether other measures than capex should be considered for determining whether a particular project should be screened out of the program for being too small (“exclusion”), or whether it should be eligible for the kind of “small PPP” support measures that are discussed later in this Section (“inclusion”).

The table below compares the potential indicators of “size” against the filtering criteria using a simple ✓ and ✗ scale. ✓✓✓ indicates the best match and ✗✗✗ the worst, with ? indicating an inconclusive outcome. Appendix 1 explains how the scores were arrived at.

¹⁴ It should also be possible to test the measures quantitatively, given sufficiently detailed data on actual projects or through Monte Carlo techniques. Such an exercise would be beyond the scope of the current paper.

Table 12 How well do the potential indicators meet the criteria?

	Early availability	Ease of estimation	Unbiased	Clear link to “size”	Proxy for VfM	Outputs not inputs
Investment	✓✓✓	✓✓	xx	✓✓	x	xxx
Investment/beneficiary	✓✓	✓✓	x	✓	x	x
Life cycle cost	✓✓	✓	✓	✓✓✓	✓✓	✓
Life cycle cost/beneficiary	✓	✓	x	✓	x	✓✓
VfM	xxx	xxx	✓✓✓	✓✓✓	✓✓✓	✓✓✓
VfM/beneficiary	xxx	xxx	x	✓	x	✓
Jobs created	✓	✓	x	✓	✓	?
Beneficiaries	✓✓	✓✓	x	✓✓	✓✓	✓✓
Beneficiary density	✓✓	✓	x	x	x	✓
Impact on GDP	xxx	xxx	xx	✓✓	✓✓	✓✓
government support	✓	✓	xxx	xxx	✓	xxx
National vs sub-national	✓✓✓	✓✓✓	xxx	✓	xx	?

Even using a simple unweighted filtering approach, the analysis indicates some clear results and implications:

- Life cycle cost is superior to the other indicators being considered, providing the best balance between practical considerations and how well it captures VfM;
- Number of beneficiaries also ranks highly, again balancing practical and theoretical considerations; however, neither of these measures can take into account the “concentration of benefits” argument used to justify local PPPs;
- As might be expected, capex provides a relatively weak measure of project size and it was ranked in the bottom 30% of the list. This is partly driven by the inbuilt bias towards capital intensive greenfield projects¹⁵ and the lack of a clear link between capex and VfM;
- VfM lies about mid-way on the list, the benefits being outweighed by the cost and effort required to estimate it, which makes it of little use as an initial screening tool.

Clearly, this analysis is by no means conclusive. However, it does highlight other indicators that could perform a better job than capex as a way to determine whether a project is too small to justify a PPP procurement or whether it might qualify for “SSPPP fast track” support measures, depending of the context. In this context, a potentially rewarding strategy might involve combining several measures such as life-cycle costs, number of beneficiaries, and national vs sub-national sponsor.

The analysis of PPI and UKPFI data in Section 2 suggested that inflation pushes up project costs over time. For countries setting a minimum hurdle to qualify a PPP, this will make it easier for smaller projects to qualify as time passes. Thus, inflation has the effect of relaxing the cap. For countries using size to

¹⁵ Of course, for some countries and institutions, that “bias” is a deliberate policy, in which case capex would be a more useful measure.

determine eligibility for a SSPPP support program, inflation will lead smaller projects to qualify for the benefits over time, while those at the top of the eligibility range will be squeezed out. This suggests that hurdle rates should be adjusted for inflation, either by automatic index-linking or through periodic reviews. The latter option may be preferable since it can incorporate other developments, such as changes in technology.

5.3 Policy and institutional framework to support SSPPPs

Despite the significant potential benefits that may be derived from SSPPPs, a decision to proactively encourage smaller PPPs will have financial and resource implications. Therefore, adopting a SSPPP support framework may not be suitable for every situation. Countries who are new to PPP may find it a more effective use of resources to build capacity and experience at national level before extending the program to smaller projects and sub-national strategies.

Key components of a **national strategy to support SSPPPs** (or to support sub-national PPPs) will depend on the country’s specific needs and policies, including those related to local/regional government, as well as to the PPP framework. The components could include:

- Eligibility - adopt a definition of “small”, or specify the qualifying sub-national entities;
- Institutional framework and governance for SSPPPs and where it fits within the wider PPP framework;
- Willingness of national government to provide support, kinds of support to be provided;
- Exemptions from the national PPP process for qualifying projects – “fast track”;
- A central organization or unit for SSPPPs. A key decision concerns whether its role will be support only (a “gate-opener”) or whether it will also have decision-making responsibility (a “gatekeeper”).

National government needs to drive the agenda on SSPPPs, to provide clarity to municipalities and to potential bidders. At the same time, the measures must be in line with overall policy on the decentralization of government, local autonomy, urban infrastructure, rural development, utilities regulation, etc.

5.4 Measures to address preparation and tendering costs



The high level of preparation and tendering costs is often cited as the main argument against using PPP as a procurement method for small projects. This is understandable to the extent that government has limited capacity to implement PPP tenders. As such, it makes sense to focus and utilize resources on larger projects that have the potential to generate greater benefits for the same resource input. Preparation and tendering costs are largely a function of the need to understand the risks, costs and benefits involved in undertaking the project.

However, it is also reasonable to argue that some standards can be lowered for smaller projects, since there is less at stake for either party, yet there can still be significant potential benefits.

Measures identified to address preparation and tendering costs for SSPPPs are as follows:

- Establish a Fast Track SSPPP process;
- Encourage replication of successful SSPPP projects;
- Bundle similar projects together;
- Compile and publish the SSPPP Program;
- Reduce Advisor costs by bundling mandates and/or using framework contracts;
- Establish a Project Development Fund;
- Standardize documentation and develop templates;
- Provide a resource base of relevant material;
- Take measures to reduce bid costs for Contractors.

Adopting a **Fast Track SSPPP Process** is a crucial component for supporting eligible SSPPPs. However, it needs to balance the desire to cut costs and speed up the process against the need to identify and address potential risks. A Fast Track system works best with standard projects and documents; it would be less appropriate for a “first of its kind” project.

There still needs to be a degree of external governance to provide the necessary checks and balances. However, to speed up the process this authority can be delegated to a national level SSPPP Support Unit or similar organization, as discussed in Section 5.5 below.

The aim of the Fast Track SSPPP process is to reduce the time needed to prepare, structure and tender qualifying projects and therefore reduce the associated costs. This could involve the following:

- Minimize the number of decisions made outside the PA;
- Incorporate fixed response times for internal actions and decisions;
- Eliminate or at least minimize the scope for negotiations on the PPP contract. Adopting standard contracts will facilitate this;
- Consider a “limited shortlist” approach – instead of including all qualified bidders, just invite the top 3-5. This will reduce tendering time and effort as well as bid costs for bidders that don’t make the cut;
- Relax any rules linking contract terms to capex, allowing SSPPPs to recover investment costs over longer periods and hence reduce user charges;
- Use standardized documentation as much as possible, such as RFQ, RFP, proposal templates.

Eligibility for the Fast Track can also be used to trigger the other measures in the toolkit.

Successful localized SSPPPs provide templates that can be **replicated** in other locations, extending the benefits and spreading at least part of the initial development costs over more projects. Publicizing these successes, providing templates and disseminating know-how could be an effective way for national government institutions to achieve encourage replication.

Another potentially important measure is to establish a **Project Development Fund**. This would provide technical assistance and funding to support municipalities and other sub-national entities in identifying, preparing and procuring SSPPPs (see, for example, the Greek Thisseas program). Specific support provided may include:

- Feasibility study, business case/VfM analysis;
- Technical and transaction advisors;

- Technical assistance;
- Capacity building.

5.5 Measures to address contract management costs



Neglecting contract management increases the risk of project failure after the private Contractor has been appointed. It is important to monitor Contractor performance to ensure that they deliver what was agreed; it is equally important to ensure that the PA delivers on its responsibilities, especially with regard to making payments to the Contractor (in government-pays PPPs) and regulating quality and tariffs (in user-pays PPPs). Specific measures to address contract management include the following:

- Ensure that a Contract Manual is prepared and adopted for every SSPPP that reaches Financial Close;
- Incorporate standard commercial contractual provisions to penalize late- or non-payment by the PA;
- Upgrade the financial systems of the PA to incorporate PPP obligations;
- Review the budgeting process to ensure that funds are available when needed;
- Establish contract Management Units within the PA;
- Incorporate quality standards, KPIs and data collection requirements within SSPPP contracts.

Of these, establishing a **dedicated contract Management Unit (CMU)** is a crucial measure to ensure success. In the case of SSPPPs it is more efficient to establish a single unit for the procuring authority (e.g., a municipality or local authority) that will be responsible for managing all PPP contracts falling under that organization. This spreads the cost of having a specific unit over more than one project. For complex government-pays contracts with monthly billing against multiple KPIs, this will need at least some full time resource. Attention should also be given to investing in IT and systems to automate the work (such as data collection for KPIs). Specific aspects can also be outsourced to private companies where they are highly specialized and/or required infrequently (legal expertise, for example).

The CMU should include sufficient staff and other resources, as well as the necessary skill set (contract management, legal, technical and financial). Not all of this will require full time staff or in-house resources – advisors can be brought in as needed. The CMU must also have sufficient authority to be able to secure inputs from other parts of the organization and have the necessary authority to negotiate with the Project SPV as issues arise.

Local authority **financial and budgeting systems** that were designed for traditional procurement can create obstacles to the smooth, timely payment of Contractors on government-pays projects, putting pressure on the viability of the project SPV and potentially opening the door to corruption. The national government has to ensure that these systems are fit for purpose and subsequently implemented correctly.

A potentially more sensitive measure for the PA, but also a very important one to give confidence to investors and lenders, is to **incorporate commercial penalties for late payment into the PPP contract**.

Many governments adopt one-sided “standard” contracts that provide little or no recourse for Contractors if the PA delays payment. This is a clear contravention of the principle that “risks should be allocated to the party best able to address them” since it places all payment risk (in a government-pays PPP) on the Contractor.

Sub-national bodies frequently face constraints on their ability to pay promptly. Consequently, this creates a significant problem for the project SPV with regards to their source of income from these projects. The impact is exacerbated if the investors are SMEs with limited resources to support the project until payment is received. Chronic payment delays by the PA not only risk the failure of the project itself but potentially also the bankruptcy of the investors. Standard SSPPP contracts for government-pays projects should include the kind of escalating protections and penalties that are typically included in private sector contracts, such as late payment interest, right to invoke dispute resolution and termination provisions, and possibly, depending on the specific project, the right for the Contractor to withhold services until payment is made. The primary aim of these measures is to incentivize the PA to put the necessary systems in place to make payments promptly. Their power lies not so much in the financial cost but in the desire of the responsible officials to avoid the negative consequences of the issue being escalated to higher levels.

5.6 Measures to address PA capabilities



These measures need to be delivered by a national government agency to ensure consistency and availability of resources. This could be the national PPP body or the ministry responsible for regional and local government. Specific measures include:

- Establish a Central SSPPP Support Unit;
- Providing specific support with regulation;
- Training and capacity building for sub-national Procuring Authorities;
- Dissemination of relevant information;
- Adopting PPP structures that are particularly suited to SSPPPs, such as Joint Ventures and Co-operation agreements (F. Hobma, 2006) or BTL arrangements (KDI, 2017).

A **Central SSPPP Support Unit** could be a SSPPP “window” in the national PPP organization; or a separate “sub-national PPP unit” either within the national PPP organization or in the ministry responsible for regional and local government. The provision of central government support to sub-national government entities is a familiar component of decentralization programs. Examples in the PPP space include Greece (Karaiskou, 2007). Services provided by such a Unit could include the following:

- Delivery of other measures identified in this Section including the Project Preparation Fund, training, dissemination of information and standards, advice on upgrading financial systems to accommodate government-pays PPP contracts;
- Provide direct technical assistance on specific projects;
- Establish a library of relevant resources and disseminate relevant information;

- Encourage replication of successful projects by actively marketing to other municipalities;
- Compile individual authority plans into a national SSPPP program;
- Monitor and report on programs and projects;
- Policy analysis and recommendations to improve the Fast Track program and other measures.

To speed up the process, the Unit could be authorized by Government to take certain decisions for qualifying SSPPPs, such as:

- Approve eligibility for the Fast Track Program;
- Final approval of the PPP contract;
- Enforce standards in the PPP process and transaction documents.

The “proactive” options provide a necessary level of national oversight but avoids clogging up the system by allowing the Unit to act as the gatekeeper for smaller projects.

Regulation support: Many PPPs incorporate “regulation by contract”, where the PA takes on regulatory responsibilities over tariffs, quality standards, technical standards, performance monitoring, consumer protection, etc. The expertise required can be quite technical and narrowly-focused, and may not be available at local level. Furthermore, it may only be needed occasionally, for a periodic tariff review or for dispute resolution. It may not be economic for the PA to employ someone full time to do this.

Some power and water SSPPPs are considered to be too small to fall under national regulations. The cost of monitoring and compliance for such small projects could create an unjustifiable burden for operators. For example, a maximum tariff that is set based on costs of the largest operators may be too low for a small rural operation to be viable. In some cases, national regulators issue special regulations for qualifying projects, which aim to provide some protection to users without imposing an untenable cost burden on the provider.

Regulatory support to the PA can be provided centrally, through a national PPP organization, a national sector regulator or the relevant sector ministry. This may include exemptions from certain regulatory requirements, technical assistance, support for regulatory reviews, documentation, etc.

5.7 Measures to address Contractor capabilities



The main approach for national governments to improve Contractor capabilities is to ensure that the private parties winning SSPPP projects clearly understand what is involved and have the resources and expertise needed to undertake the project successfully. Two specific mechanisms can be used to achieve this:

- Improve the understanding of potential bidders through outreach and capacity building;
- Improve the quality of the shortlist through careful due diligence during the pre-qualification phase.

Outreach and capacity building efforts to potential private Contractors could include: presentations/Q&A sessions on the PPP Program and how to participate; general workshops on PPP; roadshows in key commercial and business locations; media campaigns; and conferences. If warranted, there could be specific events on, for example, the Fast Track program for SSPPPs.

It is important for the PA to “**know your bidder**”. This is achieved during the pre-qualification process, which should be designed carefully to filter out unsuitable Contractors. In addition to the Expressions of Interest (EoIs) submitted in response to the RFQ, the authority should carry out additional research on less-experienced bidders in relation to their capabilities to ensure they satisfy the qualification criteria.

5.8 Measures to address Bankability



Many of the measures described above are set to improve bankability, especially those relating to standardization of contracts and fiscal measures to improve the PA’s budgeting and payments. Additional specific measures include the following:

- Provide lines of credit that commercial banks can on-lend to SSPPPs;
- Alternatively, establish a loan guarantee scheme for SSPPPs;
- Provide clarity on financial support available from the national government;
- Extend outreach/capacity building efforts to include local banks;
- Consult potential lenders as part of the market sounding during project preparation.

A “**SSPPP Window**” or **specific line of credit** at one or more local commercial banks would provide capital to be on-lent to qualifying SSPPPs. The credit can be structured to require local commercial banks to participate in the financing. This could have significant wider benefits by drawing local banks into PPP finance more generally.

Alternatively, rather than directly financing infrastructure, government may establish a **guarantee scheme for SSPPPs**. This could guarantee payments/revenues (for user-pays PPPs) to the project SPV or to guarantee loan payments to banks by the SPV. The scheme acts as an insurance policy for commercial lenders, thus reducing their risk in lending to SSPPPs. Loan guarantee schemes are common tools for encouraging banks to lend to specific sectors or types of borrower. For example, Saudi Arabia has such a scheme to support SMEs; other countries have schemes to support renewable energy loans. Local banks are more willing to lend to projects when their payments are protected. Over time, as banks grow to understand the risk profile of the sector being supported, they become more willing to lend, even without guarantees. Many of the more successful schemes include technical assistance and capacity building that targets the banks, to support this learning curve.

6. Conclusions

6.1 Key Findings and Conclusions

A number of governments have effectively excluded small-scale projects from their PPP programs. This is often justified by the argument that a significant element of PPP procurement costs remains fixed regardless of the size of the project. This makes it difficult to justify the resources spent on SSPPPs, since they will need to generate proportionally greater benefits to be justified on a VfM basis. Alternatively, it may be argued that SSPPPs should be encouraged, since they have the potential to make a big impact on their beneficiaries, albeit on fewer people.

This research examined a number of proposals concerning SSPPPs and found the following:

- There is conflicting evidence as to whether SSPPPs can generate sufficient VfM to justify proceeding. The quantitative analysis suggests that interest in SSPPPs has been declining in recent years especially since 2005/2006. However, the case studies examined in this research provide examples of successful SSPPP projects;
- The available data on past PPPs may lead to misleading conclusions on the popularity of SSPPPs. The main data sets, and the widespread adoption of a definition of “small” that only considers capital investment, are biased towards large, economic infrastructure projects. Social infrastructure projects, which tend to be smaller, are under-represented in the data;
- The view that SSPPPs are more likely to be sponsored by sub-national authorities (municipal, local and regional government) is supported. These organizations face specific constraints in implementing PPPs. Policy measures designed to address these constraints could have a significant impact on the number of SSPPPs implemented;
- Qualitative analysis suggests that SSPPPs can have significant benefits for end-users. Conversely, the costs are most likely to fall on the PA. This tends to support the argument that support measures targeting project sponsors at sub-national level could generate disproportionate economic and social benefits at local level. Replicating successful local projects can help to extend these benefits to other towns, cities and regions;
- The key constraints to SSPPPs can be categorized into preparation and tendering costs; contract management costs, PA capabilities, Contractor capabilities; and bankability. This reinforces the need for a holistic approach including measures targeting each of these aspects. Many of these measures can be equally effective in supporting larger PPPs.

Table 13 lists measures that can be combined into such a holistic approach, forming a National Strategy for SSPPPs. The most important of these address two aspects: i) the procurement process; and ii) the institutional framework.

Table 13 A holistic approach to SSPPPs – key support measures

Preparation & Tendering	Contract Management	PA Capabilities	Contractor Capabilities	Bankability
Most important				
Fast track Process	Contract Management Unit	Central SSPPP Support Unit	Outreach & capacity building	SSPPP credit line or guarantee scheme
Replication		Regulation support	“Know your bidder”	

Project Development Fund	Financial & budgeting systems Penalties for late payment		
Other measures			
Bundling	Contract manual	Capacity building	Clarity on govt. Support
Publish program	Data requirements	Dissemination	
Bundling advisors		JV and co-operation structures	Outreach & capacity building
Standardize			Include in market sounding
Resource base			
Reduce Contractor bid costs			

6.2 A Way Ahead for SSPPPs

National government needs to drive the agenda on SSPPPs by providing clarity to sub-national authorities as well as to the potential Contractors. Accordingly, the measures must be in line with overall policy on decentralization of government, local autonomy, urban infrastructure, rural development, etc.

Two particular findings provide a possible way forward. Firstly, defining the “size” of a project solely in terms of the capital investment creates an inbuilt bias against SSPPPs. A significant part of the perceived benefit of PPPs comes from the Contractor addressing life cycle costs, including O&M. This suggests that life-cycle costs could provide a better measure of project size. Secondly, PPP procurement costs are not necessarily as “fixed” as perceived wisdom suggests. As with much else in PPP, there is a trade-off between standards and risk. Making it easier to implement SSPPPs by relaxing oversight, for example, increases the risk of failed projects. At the same time, however, the cost of project failure will be smaller, while the potential impact in individuals could be significant. There is therefore a case to be made that relaxing some checks and balances in order to speed up the process and reduce costs may be a more acceptable trade-off in the case of SSPPPs.

The key steps in the process should include the following:

1. Decide whether proactively supporting SSPPPs is a valid policy at the current stage of the country’s PPP Program. It could be argued that during the early stages, it may be better to focus scarce government resources on larger national infrastructure projects that will generate the most economic benefit. Later on, when government has more experience with PPP procurement, and the potential benefits and risks are clearer, it may be more appropriate to adopt policies to encourage SSPPPs¹⁶. If the decision is to focus on larger projects, then a subsidiary decision concerns whether SSPPPs should be excluded explicitly, by setting a size hurdle, or indirectly, by adopting the same VfM standards as larger projects;

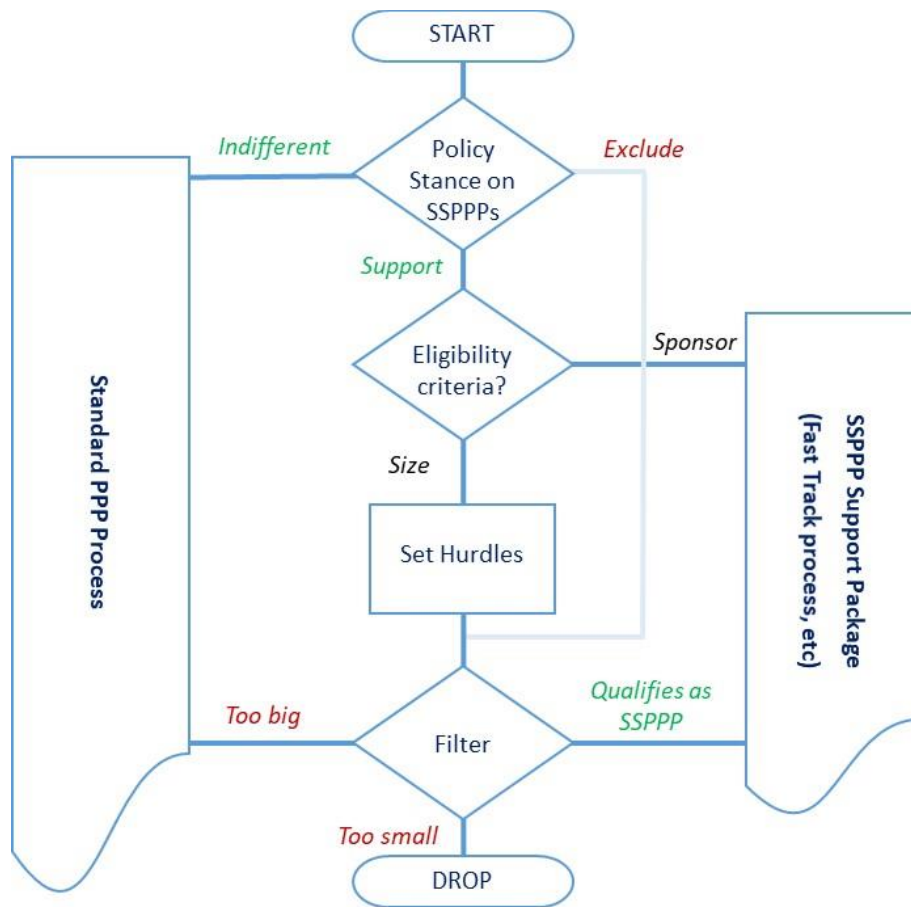
¹⁶ There is an alternative argument that SSPPPs can unlock private resources to provide local services to remote or small communities that would otherwise not be delivered by the public sector given other calls on government resources. SSPPPs should therefore be encouraged sooner, rather than later, as a regional/rural/small community development tool.

2. An alternative approach could be to base eligibility for the program on the PA rather than the size of the project, since some of the key constraints apply to, e.g., regional or local government entities, regardless of the size of the project;
3. Adopt a measure for project size, ideally one that is objective and unbiased such as life-cycle costs. By using this measure, set the hurdle for “small” PPPs. This should be based on analysis of VfM rather than just setting an arbitrary number. This hurdle is needed both for an exclusionary policy (no PPPs below X) and for a proactive support policy (PPPs below X are eligible for support¹⁷). For an exclusionary policy, the hurdle rate should be driven by VfM calculations under the existing PPP framework. For a supportive policy, it should be based on VfM calculations incorporating the support measures that may affect the VfM equation. A statistical approach (e.g., Monte Carlo data generation) could be usefully adopted. Hurdle rates should be reviewed periodically to allow for inflation, technological change and other developments;
4. If proactive support is selected, identify and design the support measures to be included in the package;
5. Test these measures on a pilot basis before rolling out nationally.

This algorithm is illustrated in the figure below.

¹⁷ In this case there may need to be a second, lower, hurdle to filter out projects that are too small to be justifiable even with the support measures.

Figure 25 Algorithm for developing an SSPPP support package



Key components of a national strategy to support SSPPPs/municipal PPPs will depend on the specific needs and policies of the government, including those related to local/regional government, as well as the PPP framework. The components could include:

- Eligibility - adopt a definition of “small”, or specify the qualifying sub-national entities;
- Institutional and governance framework for SSPPPs, and where it fits within the wider PPP framework;
- Willingness of national government to provide support, kinds of support to be provided;
- Exemptions from the national PPP process for qualifying projects – “fast track”;
- Will there be a central organization or unit for SSPPPs? Will its role be support only (a “gate-opener”) or will it also monitor and have decision-making responsibility (a “gatekeeper”)?

6.3 Conclusions

A perception that smaller projects cannot generate sufficient benefits to justify the additional cost of using a PPP procurement approach has led some jurisdictions to set hurdles for minimum project size. This research argues that such a blanket approach could lead to missed opportunities. While larger, national infrastructure projects may generate higher overall economic and social benefits, SSPPPs often concentrate their benefits on fewer beneficiaries, such that the impact on individuals can be substantial. Furthermore, at sub-national levels, public sector resource constraints may mean that the only way to

finance infrastructure is by drawing on the private sector. In such cases, the more appropriate comparator is “no project” rather than “traditional public procurement”.

Analysis of various data on PPPs that have reached financial close since 1990 shows that projects involving investment below USD50m make up a small but significant part of the total. Case studies show that size is not an insurmountable barrier to success.

Examination of the potential benefits and constraints facing SSPPPs suggests that a holistic approach, addressing preparation and contract management costs, the capacity of the main public and private sector players and bankability, could increase the chances of success. Ideally, this should be within a policy framework designed specifically to encourage small-scale or sub-national PPPs. Key elements of such a package should include:

- Reduce preparation and tendering costs:
 - Adopt a fast track process for qualifying projects for the support package;
 - Encourage replication of successful local projects;
 - Make financial and technical resources available to sub-national project sponsors;
- Reduce contract management costs:
 - Require project sponsors to establish the necessary institutional framework for contract management;
 - Ensure that financial and budgeting systems are sufficient to ensure that the project sponsor is able to meet its financial obligations;
 - Ensure that PPP contracts correctly allocate payment risk;
- Improve PA capabilities:
 - Establish a central unit to provide specialist resources and support. Decision-making authority can be delegated to this unit to help speed up the tender process;
 - Establish regulatory systems suitable for smaller projects and provide specialized support;
- Improve Contractor capabilities:
 - Provide outreach and capacity building to small local companies as potential Contractors, to improve their understanding of the specific needs of PPP procurement;
 - Set appropriate standards for pre-qualification to exclude unqualified/inexperienced bidders;
- Enhance bankability. In addition to the initiatives listed above:
 - Establish a credit line or loan guarantee scheme to encourage local bank lending to smaller- or sub-national PPPs.

As a corollary, there is a need to adopt a less flawed measure of “size” than traditional indicators based on capex, which favor new infrastructure investments. Specifically, life-cycle costs may provide a less biased proxy for VfM while still being a practical option for the early screening of projects. This applies whether the purpose is to include projects in a SSPPP support package or to exclude smaller projects from the PPP program altogether.

References

- A Ahmad, S. S. (2014). *A Preliminary Review of Trends in Small-Scale Public-Private Partnership Projects*. World Bank.
- Ahmad, A. (2016). *The importance of small public-private partnerships*. Retrieved from World Economic Forum: <https://www.weforum.org/agenda/2016/03/the-importance-of-small-public-private-partnerships/>
- APEC. (2014). *Infrastructure PPP Case Studies of APEC Member Countries*. APEC.
- Australian Capital Territory. (2016). *Guidelines for Public Private Partnerships, Second Edition*.
- Bain, R. (2009). *Review of Lessons from Completed PPP Projects Financed by the EIB*. European Investment Bank.
- D. Marett, M. M. (2018). *PPP Model Framework For Small-Scale Renewable Energy Power Systems in Fiji*. Govt. of Fiji/UNDP.
- Delmon, V. (2014). *Structuring PSP Contracts for Small-Scale Water Projects*. World Bank.
- DG for Internal Policies. (2017). *Research for REGI Committee: PPPs & Cohesion Policy*. European Parliament.
- F. Hobma, W. v. (2006). *Small Scale PPP in Construction and Infrastructure*. Delft University of Technology.
- Global Platform for Sustainable Cities. (2017). *Small-Scale Municipal PPP*.
- HM Treasury. (n.d.). Retrieved from www.gov.uk/government/publications
- HM Treasury. (2003). *PFI: meeting the investment challenge*.
- HM Treasury. (2011). *Private Finance Initiative: seventeenth report of session 2010-12*.
- IFC. (2017). *PPP Stories - Bhutan: Thinphu parking*.
- Indra, D. I. (2011). PPP Policy & Regulation in Indonesia. *presentation*. National Development Planning Agency (Bappenas).
- J Kim, J. K. (2011). *Public-Private Partnership Infrastructure Projects: Case Studies from the Republic of Korea Volume 1: Institutional Arrangements and Performance*. KDI/ ADB.
- Karaiskou, E. (2007). *Public-Private Partnerships: an innovative tool for decentralizing the production of public goods in contemporary Greece*. University of Athens.
- KDI. (2017). *PPP Procurement Build-Transfer-Lease (BTL) Project*. KDI.
- Kim, K. &. (2011). *PPP Infrastructure Projects: Case Studies Form the Republic fo Korea Volume 2*. Asian Development bank.
- MacDonagh, V. &. (2016). *PPPs Case Study #6, Automatic fare Collection Systems: the case of Manila*. ESCAP.

- Ministry of Finance. (2010). *PPPs in India: Compendium of Case Studies*. Ministry of Finance.
- Ministry of Finance. (n.d.). *Procurement; Public-Private Partnerships*. Retrieved from Ask MOF: <https://www.ifaq.gov.sg/MOF>
- Ministry of Finance, Federal Democratic Republic of Ethiopia. (2017, August). Policy for the Use and Implementation of Public-Private Partnerships.
- Partnerships Victoria. (2013). *Requirements*. Victoria State.
- PPP Association Lithuania, Invest Lithuania. (2018). *Public and Private Partnerships: Lithuania's Story*. PPP Association Lithuania, Invest Lithuania.
- PPP Knowledge Lab. (2017). *PPP Reference Guide Version 3*. World Bank.
- R Alkhareif, J. Q. (2016). *Saudi Arabia's Exchange Rate Policy: Its Impact on Historical Economic Performance*. SAMA Working Paper 16/4.
- S Kyvelou, G. K. (2011). Perspectives of local public-private partnerships towards urban sustainability in Greece. *International Journal of Sustainable Development*.
- The Canadian Council for Public-Private Partnerships. (2016). *P3'S: Bridging the First Nations Infrastructure Gap*.
- Thierie, W. (2018). *Essays in PPP Financing. An analysis of financial aspects of Public-Private Partnerships, Abstract*.
- World Bank. (2017). Public Private Partnerships & Korean experiences. World Bank.
- World Bank. (2019). *PPI Database*. Retrieved from ppi.worldbank.org
- World Bank/APMG. (2017). *CP3P Certification Guide*.

Appendix 1 Scoring of potential measures of “size”

	Early availability	Ease of estimation	Unbiased	Clear link to “size”	Proxy for VfM	Outputs not inputs
Investment	✓✓✓ Capex estimates usually prepared at pre-feasibility or earlier	✓✓ Experienced govt. staff/technical advisors, comparable projects	xx Favors greenfield infrastructure over brownfield/services	✓✓ A big investment generally means more infrastructure	x Capex not a direct contributor to the VfM calculation	xxx Measures the amount of infrastructure injected into the project
Investment/beneficiary	✓✓ Beneficiaries not always available until appraisal	✓✓ Ratio of two fairly simple indicators	x Favors greenfield, high spend projects with few beneficiaries	✓ Scaling reduces but does not eliminate the link	x Capex not a direct contributor to the VfM calculation	x Capex is an input but beneficiaries may proxy for outputs
Life cycle cost	✓✓ Opex not always available until appraisal	✓ Usually requires some kind of financial model, demand estimate	✓ Includes both capex and opex but emphasizes high spend national projects over smaller local ones	✓✓✓ Incorporates the trade-off between investment and operating costs	✓✓ A large part of the commercial viability calculation	✓ Costs are inputs, though opex could proxy for amount of demand met
Life cycle cost/beneficiary	✓ Opex, beneficiaries not always available until appraisal	✓ Usually requires some kind of financial model, economic impact study	x Could favor inefficient projects with few beneficiaries	✓ Scaling reduces but does not eliminate the link	x A project with more beneficiaries should have higher VfM	✓✓ Includes beneficiaries (output) and opex (proxy for demand)
VfM	xxx Not estimated until appraisal stage	xxx Complex combination of financial, economic, fiscal & risk elements	✓✓✓ Measures the project’s total net benefit to society	✓✓✓ In PPP terms VfM is the true measure of the size of a project	✓✓✓	✓✓✓ Measures the benefit to society derived from the outputs
VfM/beneficiary	xxx Requires an estimate of VfM	xxx Requires an estimate of VfM	x Could favor a project with few users who gain a lot over one with many users who gain a little	✓ Scaling reduces but does not eliminate the link	x Scaling values the benefit to an individual over the benefit to society as a whole	✓ Measures the benefit to an individual derived from the outputs, not society as a whole
Jobs created	✓ Not usually available until appraisal (financial model)	✓ Usually requires some kind of financial model, economic impact study	x Favors labor-intensive solutions (high opex) over capital intensive	✓ Larger projects can create more jobs	✓ To the extent that jobs represent a benefit to society, but only part of VfM – quite a narrow measure	? Labor is clearly an input, but in developmental terms job creation can be viewed as an output or benefit
Beneficiaries	✓✓ Usually straightforward to estimate, but not always available until appraisal	✓✓ Potential beneficiaries = catchment area population + any transients	x Favors projects that impact the most people even if individual benefits are small	✓✓ Often, though not always, more beneficiaries (“bigger”) means more VfM	✓✓ Often, though not always, more beneficiaries means more VfM	✓✓ Benefits are the main output, the reason why a project is undertaken
Beneficiary density	✓✓ Beneficiaries/catchment area straightforward but usually during appraisal	✓ Catchment area may be difficult if there are many transients	x Could favor projects with a small or narrowly defined catchment	x Scaling eliminates the link – eg building someone a house would score highly	x Scaling values the benefit to a small community over the benefit to society as a whole	✓ Benefits are the main output, but scaling reduces the usefulness
Impact on GDP	xxx Not usually a standard indicator for PPPs	xxx Requires at least investment multipliers, preferably an integrated economic model;	xx Favors investment (capex); also favors economic over social infrastructure	✓✓ A big investment generally has a larger impact on GDP	✓✓ Economic growth generally seen as a net benefit to society but ignores social; impacts (eg inequality)	✓✓ GDP growth is a key output of public sector investments, though impacts long term & difficult to measure

	Early availability	Ease of estimation	Unbiased	Clear link to "size"	Proxy for VfM	Outputs not inputs
		net impact may be small, hard to disentangle				
government support required	✓ Not usually available until appraisal (financial model)	✓ Requires financial model	xxx Favors easily bankable, low risk, user-pays, economic infrastructure projects	xxx Driven by other factors such as demand, bankability & policy on subsidies	✓ Fiscal impact is one of the components of VfM but this measure ignores additional revenues (eg taxes, concession fees)	xxx Measures the funds injected into the project by government
National vs sub-national	✓✓✓ Identity of the PA/project sponsor known from the start	✓✓✓ Does not need to be calculated or estimated	xxx Favors certain types of sponsor rather than certain types of project	✓ Municipalities generally have smaller projects (Section 2) but not always	xx No clear link between project sponsor and VfM	? Neither an output nor an input

Appendix 2: Specific Measures to Support SSPPPs

A2.1 Policy and institutional framework

Measure:	National strategy on SSPPPs/municipal PPPs
Features:	<p>Depending on the specific needs and policies (including those related to local/regional government as well as the PPP framework), components could include:</p> <ul style="list-style-type: none"> • Eligibility - need to adopt a definition of “small”, or specify the qualifying sub-national entities; • Institutional framework, where it fits within the wider PPP structures; • Willingness to provide support, kinds of support to be provided (see below for options); • Exemptions from the national PPP process for qualifying projects – “fast track”; • Will there be a central organization or unit for SSPPPs? Will its role be support only (a “gate-opener”) or will it also monitor and have decision-making authority (a “gatekeeper”)?
Constraints addressed:	Provides greater certainty over whether and which SSPPPs might be supported and on the type of support available. Will also help in project identification and screening.
Advantages:	<ul style="list-style-type: none"> ✓ Provides clarity to Procuring Authorities, Contractors and lenders; ✓ Demonstrates commitment to SSPPPs, which will help potential Contractors decide on whether to bid; ✓ Facilitates the adoption of specific support measures for SSPPPs; ✓ Can be presented as a measure to support SMEs.
Disadvantages:	✗ Could draw attention and resources away from the main PPP program.
Key risks:	<ul style="list-style-type: none"> • Raising the profile of SSPPPs could have negative feedback if projects fail; • Applying scarce national resources (experience, finance) to SSPPPs could weaken the support provided to larger projects.
Observations:	National government needs to drive the agenda on SSPPPs, to provide clarity to municipalities and to potential bidders. At the same time the measures must be in line with overall policy on decentralization of government, local autonomy, urban infrastructure, rural development, etc.

A2.2 Measures to address preparation and tendering costs

Measure:	Fast Track SSPPP Process
Features:	<p>Specifics will depend on the standard process required for larger PPPs; the aim will be to reduce the timescale (especially by reducing the number of approval/decision points, since these have the greatest potential for delay – on average each decision kicked up to a higher authority can add 2-6 months).</p> <ul style="list-style-type: none"> • Minimize the number of decision points made outside the PA. Aim for two: <ul style="list-style-type: none"> ○ Initial approval to use PPP procurement, including eligibility for the Fast Track; ○ EITHER: approval of the final contract;

	<ul style="list-style-type: none"> ○ OR: Approval of the selected Contractor and Proposal¹⁸; ● Incorporate fixed response times for internal actions and decisions, such as preparation of the bid Evaluation Report, response to bidder questions and data requests. Consider adopting a “no response within [X] days means approved” provision as much as possible; ● Eliminate or at least minimize the scope for negotiations. Standard contracts will facilitate this; ● Consider a “limited shortlist” approach – instead of including all qualified bidders (to maximize competition), just invite the top 3-5. This will reduce tendering time and effort as well as bid costs for bidders (better not to make the list than to be one out of 15 bids and incur the bid preparation cost with a much lower chance of winning); ● Prepare and disseminate a Manual setting out the process, timing and the qualification and other requirements for the Fast Track process; ● Relax any restrictions on the term of SSPPP contracts. This reduces re-tendering costs and allows initial capex to be recovered over a longer period, improving affordability; ● Use standardized documentation as much as possible, such as RFQ, RFP, proposal templates. <p>Include other measures as described below, e.g., no bid bonds, access to government support for SSPPPs, etc.</p>
Constraints addressed:	Cost (time and money) of the procurement process, both for the PA and for bidders.
Advantages:	<ul style="list-style-type: none"> ✓ Reducing procurement costs reduces the VfM hurdle, allowing smaller projects to proceed; ✓ Lower resource requirement for the PA; ✓ Lower cost for bidders, improving access for local firms and SMEs; ✓ Tenders can be completed more quickly.
Disadvantages:	<ul style="list-style-type: none"> ✗ Taking short cuts increases the risk of failure.
Key risks:	<ul style="list-style-type: none"> ● In initial stages there will be no “standard” projects. The process will naturally need more time and resources during the build-up stage. Such indirect benefits may not be captured by the VfM calculations, increasing the risk of rejecting projects that would otherwise be justified – hence the need for pilot projects of various types, which won’t face the same time and resource constraints; ● Higher risk of project failure. This must be weighed against the potential benefits from the successes.
Observations:	Need to balance the desire to cut costs and speed up the process against the need to identify and address potential risks. Hence avoid reducing requirements for due diligence, soil and other technical studies, etc. A Fast Track system works best with standard projects and documents; it would be less appropriate for a “first of its kind” project. There still needs to be a degree of external governance to provide the necessary checks and balances, although it need not be at as high a level as for larger projects.

¹⁸ If the recommended measures to standardize contracts and eliminate or minimize negotiations are part of the Fast Track there should be no need for third party approval of the final deal, just of the winning proposal and Contractor.

Measure:	Project Development Fund
Features:	<p>National government establishes a fund to support municipalities and other sub-national entities in identifying, preparing and procuring SSPPPs (see, for example, the Greek Thisseas program). This could cover:</p> <ul style="list-style-type: none"> • Feasibility study, business case/VfM analysis; • Technical and transaction advisors; • Technical assistance; • Capacity building.
Constraints addressed:	Technical capacity of PA to prepare and procure projects; financial support to cover advisory costs.
Advantages:	<ul style="list-style-type: none"> ✓ Helps ensure projects are prepared to a good standard – less risk of failure; ✓ Combination of technical and financial support more effective than just financial; ✓ Capacity building helps develop capacity for future projects; ✓ National government has more control over the SSPPPs tendered at sub-national level.
Disadvantages:	✗ Effectively pushes responsibility for SSPPPs back to National government which may conflict with decentralization efforts.
Key risks:	<ul style="list-style-type: none"> • Administration requirements to obtain the funds could extend the time needed for preparing the project; • Potential for political interference from National government.
Observations:	The Greek program also included financing for PPPs. It may be better to provide this through a different mechanism to avoid it becoming an automatic component for every project supported by the fund. Terms and conditions could be structured to recover part or all of the cost if the PPP is successful.

Measure:	Replication of Similar Projects
Features:	<p>The nature of sub-national authorities is that their project needs are likely to be similar. Urban centers are likely to face similar public transport and parking constraints, rural locations may face difficulties obtaining access to power, water, internet, etc. Successful projects in one location can be replicated elsewhere at a much lower procurement cost, since they will use the same structures, documentation, etc.</p> <ul style="list-style-type: none"> • Proactive dissemination of information on successful small projects to other potential locations; • Could include marketing of success stories to encourage other authorities to adopt similar projects; • Ensure that lessons learned are incorporated into subsequent tenders; • Ensure that transaction documents and other templates are used in subsequent tenders.
Constraints addressed:	Reduce preparation, appraisal and structuring costs by not “reinventing the wheel” every time a similar project is launched. Also improves bidder appetite and bankability, since the structure and contracts will have been proven in previous transactions.
Advantages:	✓ Spreading best practices across the country;

	<ul style="list-style-type: none"> ✓ Save time and money for subsequent projects; ✓ Facilitates a “program” approach rolling out similar projects across the country, which is attractive to potential bidders.
Disadvantages:	<ul style="list-style-type: none"> ✗ Sometimes “one size does not fit all”. Replicated projects must be sufficiently similar to the original benchmark; ✗ Lack of buy in from local authorities for projects that may not be priorities for them.
Key risks:	<ul style="list-style-type: none"> • Resistance from local authorities who may not see a similar project as a priority for their area but feel pressured to go ahead; • Blindly copying across documentation without checking it against the needs of the new project; for example, technical annexes for a hydroelectric plant may be specific to a certain type and size of installation; • “Square peg in a round hole”. Forcing a structure and contract from a previous project that is not very close to the present one.
Observations:	<p>This needs to be done by a central organization (e.g., the proposed Central SSPPP Support Unit), since individual authorities have little incentive to “spread the word”. Care should be taken to ensure that the specifics of subsequent projects are sufficiently similar to be able to use the same structure and contracts.</p>

Measure:	Bundling Similar Projects
Features:	<p><i>“The evidence on deals with a low capital value, ..., suggests that they can offer poor value for money because of high pre-contract transaction costs relative to their overall value. Where small individual projects are bundled together, however, value for money can be secured through increased efficiencies in procurement.”</i> (HM Treasury, 2003) Spreading the fixed part of preparation and transaction costs over a number of smaller projects.</p> <ul style="list-style-type: none"> • Compile a number of similar projects (in terms of location/Procurement authority or type of project) into a single bundle; • Preparation and structuring is carried out for the bundle to minimize duplication of effort. To extract the most benefit the projects should have sufficient overlaps to create genuine savings; • Market and tender the bundle together. bidders should be able to bid for individual components, not take on the entire bundle.
Constraints addressed:	Spread fixed preparation and tendering costs over more projects to reduce the average drag on VfM.
Advantages:	<ul style="list-style-type: none"> ✓ Potential to reduce individual preparation and tendering costs by spreading them over several projects; ✓ Use the same advisors for each part of the bundle, rather than tendering separately; ✓ “Program” benefits – a package of similar projects could be of greater interest to larger/international bidders; to achieve this they should be allowed to bid for more than one project; ✓ Helps to establish standard structures and documentation for the specific type of project in the bundle.
Disadvantages:	<ul style="list-style-type: none"> ✗ Risk of cross-boundary issues, extended decision making (on issues that may require consensus across several authorities);

	<ul style="list-style-type: none"> ✗ Bundles based on location rather than type of project are less likely to generate cost savings; ✗ Large/international operators could make it difficult for smaller local firms to compete.
Key risks:	<ul style="list-style-type: none"> • Bundling heterogeneous projects just to meet a size hurdle is unlikely to generate many cost savings. To get the most benefit projects must be similar; • Bundles that cross administrative boundaries (e.g., more than one local authority) could lead to co-ordination problems.
Observations:	In some countries this is done primarily to clear minimum project size hurdles rather than out of genuine synergies or potential savings. It is not clear where the bundling ends – is it just for the preparation stage or is the bundle then tendered as a single package going to a single Contractor?

Measure:	Compile and publish SSPPP Program
Features:	<p>Either as a standalone item or a subset of a larger national PPP program.</p> <ul style="list-style-type: none"> • Compile the SSPPP program (a list of projects that are expected to be tendered over the medium term), incorporating sub-programs from individual municipalities/regions and smaller projects from national bodies. This will involve a data collection exercise; • Use an iterative process to circulate information on the projects that other authorities are considering, to encourage synergies; • Check to ensure the projects fall within the “fast track eligibility” range so they can be included; • Analyze the information, identifying similarities, potential synergies and other benefits; • Publish the program, preferably online, making it available to bidders and other interested parties; • Update periodically or whenever information is submitted. <p>Option: make inclusion on the SSPPP Program the first of the two external decision points in the Fast Track process; so once a project is included in the SSPPP Program it is i) eligible for the SSPPP support; and ii) automatically approved for moving to preparation and tendering, even if the PA has no plans to do so immediately.</p>
Constraints addressed:	Dissemination of information among local authorities, transparency and information for potential bidders, incentivizing sub-national authorities to think proactively, in terms of a PPP Program, rather than reactively, as a series of one-off PPPs.
Advantages:	<ul style="list-style-type: none"> ✓ Demonstrates government commitment to SSPPPs; ✓ Key part of the Fast Track process to speed up initial approval; ✓ Making inclusion in the Program a requirement for benefiting from SSPPP support will incentivize local authorities to participate; ✓ Procuring Authorities have flexibility to start the process when they want to; ✓ Attractive to potential bidders: a program including a number of similar projects reduces the risk that they will waste resources on preparing for a one-off; ✓ Imposes discipline on Procuring Authorities, since they must comply with information requirements in order to benefit, and encourages them to plan ahead; ✓ Compilation of similar projects will facilitate project replication and bundling.

Disadvantages:	<ul style="list-style-type: none"> ✗ Places a planning burden on sub-national institutions that they may be unable to bear; ✗ Using it as a gateway to the Fast Track and other support could place implicit financial obligations on national government (e.g., to provide funding for every project in the Program).
Key risks:	<ul style="list-style-type: none"> • Ability of sub-national bodies to plan ahead sufficiently to be able to identify suitable projects; • Long delays in reaching tender stage could erode the credibility of the Program.
Observations:	National government may have to provide support for project identification.

Measure:	Advisor costs: 1) Bundle Mandates
Features:	<p>Reduce the time and cost of technical and transaction advisors and spread over several projects.</p> <ul style="list-style-type: none"> • Bundle several smaller projects (preferably, but not necessarily, similar ones); • Run a single tender for Transaction Advisors and/or other technical advisors covering their services on the entire bundle.
Constraints addressed:	Fixed component of advisory costs; time and resources needed for preparation. Appointment of advisors less likely to hold up project preparation.
Advantages:	<ul style="list-style-type: none"> ✓ More interest from larger, more experienced advisors in a larger mandate. More competitive tendering should lead to better prices; ✓ Economies of scale – save on preparation time and resources; ✓ Only one tender for advisors rather than several – a direct cost and time saving; ✓ Develop a closer relationship with the advisors, improved knowledge transfer.
Disadvantages:	<ul style="list-style-type: none"> ✗ Could exclude smaller firms that don't have the capacity to execute several projects at the same time; ✗ A poor quality advisor could affect several projects rather than just one; ✗ Still need to run a tender for each bundle.
Key risks:	<ul style="list-style-type: none"> • Objections from smaller firms that are effectively excluded; • Selected advisor may not have the capacity to handle the workload; • Advisor errors could be propagated over several projects.
Observations:	May require changes to procurement regulations. Will work best when the projects are all under the same PA.

Measure:	Advisor costs: 2) Framework contracts
Features:	<p>Reduce the time and cost to appoint technical and transaction advisors for specific projects by essentially pre-qualifying them and agreeing rates in advance:</p> <ul style="list-style-type: none"> • Run a competitive tender; • bids comprise track record and committed fee rates for different categories of staff; • Select a shortlist of candidates; • Sign Framework contract with each selected firm. This commits them to provide the specified categories of staff at the agreed rates, over an agreed timeframe (3-5 years). It may also include a specific budget from the PA, to speed up the approval process;

	<ul style="list-style-type: none"> • When a specific project comes up either i) select an advisor from the list; or ii) select 2-3 to compete; • Provide them with Scope of work; they submit a proposal on how to complete the work including an approach, timeframe and resource requirements (person-days for each grade, reimbursable expenses); • Select the preferred proposal (potentially after negotiation) and agree purchase order for the project.
Constraints addressed:	Time needed for tendering advisors and approving the final selection and budget.
Advantages:	<ul style="list-style-type: none"> ✓ Reduces the time needed to identify, procure and appoint advisors; ✓ Initial competitive tender for the framework contract should help keep fee rates low; ✓ Quicker to mobilize advisors for specific projects.
Disadvantages:	<ul style="list-style-type: none"> ✗ There is still a tendering, evaluation and negotiation element for each project and the project budgets will need to be approved; ✗ Selecting a single advisor reduces the PA's leverage in negotiating the number of days and timing; ✗ However, selecting several advisors to compete will extend the time required to complete the appointment.
Key risks:	<ul style="list-style-type: none"> • Expected savings may not materialize, e.g., if the proposal and approval process for specific projects takes too long or the PA is inexperienced in drafting Scope of Work and time requirements; • Could exclude potentially well qualified advisors; • May not know the specific projects and hence the specific skills requirements at the time of the framework tender; • Delays in initiating specific projects could lead to the framework agreements expiring or having to be renegotiated to allow for inflation; • If several projects come up at the same time the advisor may not have the capacity to do them all.
Observations:	Works best when there is a reasonable amount of certainty over the type and timing of upcoming projects or when there is sufficient workload to sustain several framework contracts, but under these circumstances bundling may provide better value.

Measure:	Standardize Documentation
Features:	<p>Develop standard structures and contracts for specific types of SSPPP, for example, rural power or water projects, urban transport services or parking, school construction and facilities management (the Korean approach), primary health care facilities.</p> <ul style="list-style-type: none"> • Disseminate to sub-national Procuring Authorities, either pro-actively or as part of a knowledge resource they can access; • Templates could include: RFQ, RFP, advertisements, bid evaluation report, financial models, standard scope of work/contracts/RfPs for technical and transaction advisors, contract management manual, contracts for particular types of project, standard contract provisions that apply to all PPPs; • Use in conjunction with replication and bundling options.

Constraints addressed:	Cost of preparing the necessary documentation; cost of advisors (reduced but not eliminated entirely); quality of documentation; bankability of contracts.
Advantages:	<ul style="list-style-type: none"> ✓ Less time spent “reinventing the wheel”; ✓ Disseminates best practices and raises standards; ✓ Less time and effort needed to prepare documentation; ✓ Procuring Authorities incentivized/obliged to use the resources, reducing risk of project failure; ✓ Relatively low cost (free to Procuring Authorities).
Disadvantages:	✗ No material disadvantages.
Key risks:	<ul style="list-style-type: none"> • Could be used to exclude potentially successful SSPPPs that do not fit the mold; • Alternatively, unsuitable contract structures could be used for SSPPPs that they were not designed for; • Failure to adjust to the needs of the specific project could lead to problems; • An aggressive “push” model could conflict with decentralization policies.
Observations:	This would be beneficial for the entire Program, not just SSPPPs. Individual authorities have little incentive to disseminate their templates so this should be driven by national government. This is a “push” approach, promoted proactively from National to sub-National. Could include an obligation to use the templates if similar projects are being tendered or alternatively, eligibility for the Fast Track, project Development Fund and other support could depend on using the templates.

Measure:	Resource Base of templates, case studies and other relevant information
Features:	<p>Establish a national knowledge base of relevant resources that can be accessed by sub-national authorities. This could include:</p> <ul style="list-style-type: none"> • Relevant case studies from the same country and from elsewhere; • Template transaction documents and contracts; • General reference and training materials; • Database of completed SSPPPs including contact details of relevant officials for follow up; • Database of experienced advisors; • Regulations, manuals.
Constraints addressed:	Cost of preparing the necessary documentation; cost of advisors; quality of documentation; bankability of contracts; capacity of the PA.
Advantages:	<ul style="list-style-type: none"> ✓ Less time spent “reinventing the wheel”; ✓ Disseminates best practices and raises standards; ✓ Less time and effort needed to prepare documentation; ✓ Relatively low cost (free to Procuring Authorities).
Disadvantages:	✗ No incentive for Procuring Authorities to use the resources.
Key risks:	<ul style="list-style-type: none"> • An overly passive “pull” approach may be under-utilized; • There is a need to update and maintain the resource as new SSPPPs are completed and new case studies become available – may be less incentive for National government to do this if it isn’t used much
Observations:	This would be beneficial for the entire Program, not just SSPPPs. The approach is “pull” rather than “push” – the material is available but it is up to the PA to seek it out.

Measure:	Reduce Contractor bid Costs
Features:	<p>PPP bid costs can be significant, particularly where they require bidders to prepare designs or demand forecasts. <i>“One private sector Contractor has suggested that their bid costs, as a proportion of a project’s capital value, are 33 per cent lower for a £50 million project compared to a project costing £20 million.”</i> (HM Treasury, 2003) The Fast Track process can include specific measures to reduce Contractor bid costs, such as:</p> <ul style="list-style-type: none"> • Set reasonable time limits (e.g., for completing the evaluation); • Eliminate the “ticket price” for participation – administration charges, bid Bonds¹⁹; • Provide standards and templates for pre-qualification and bid submissions; • Provide as much relevant information as possible in the Data Room, including market studies, technical studies, preliminary designs or at least clear design criteria; • Consider providing all bidders with a copy of the Financial Model; • Consider allowing technical proposal to include preliminary or pre-final, rather than final, designs; • Use techniques to limit negotiations; • Consider limiting the shortlist (3-5 bidders) to improve the chances of success; • Allow communications, bids, etc, to be submitted by email rather than hand delivered or by courier.
Constraints addressed:	Tender costs – some of the above measures can also reduce the PA’s costs, e.g., limiting the number of bids they will need to review, using proposal templates that are designed to highlight information relevant to the evaluation criteria, use of email for communications.
Advantages:	<ul style="list-style-type: none"> ✓ Supports the Fast Track tender process; ✓ Reduces costs to bidders, makes it easier to participate in the tender and potentially increases competition; ✓ Easier for SMEs and local bidders to participate.
Disadvantages:	<ul style="list-style-type: none"> ✗ Making it easier for less experienced bidders to participate may result in less experienced bidders winning the tender; ✗ Removing safeguards (such as bid Bonds) increases the possibility of failure which requires more effort from the PA to prevent.
Key risks:	<ul style="list-style-type: none"> • Reducing bid costs encourages less experienced bidders and increases the risk of failure.
Observations:	As with all of these measures, there is a trade-off between relaxing standards, reducing safeguards and increasing the risk of failure. The key concern is whether this increased risk i) can be mitigated at reasonable cost; and ii) is justified by the potential benefits. SSPPPs tend to be simpler projects and in any event their lower cost means there is less at risk.

¹⁹ If the pre-qualification process has been thorough and the project is well structured, the risk of a bidder pulling out for no reason should be low. Other risks (such as corruption) can be addressed by national legislation. Don’t under-estimate reputational risk as a tool for ensuring bidder performance during the tender.

A2.3 Measures to Address Contract Management Costs

Measure:	Contract Management Units
Features:	<ul style="list-style-type: none"> • Establish a contract Management Unit within the PA; • Its responsibilities would normally be included in the PPP contract; • It should include sufficient staff and other resources to carry these out, as well as the necessary skill set (contract management, legal, technical and financial). Not all of these require full time staff or in house resources – advisors can be brought in as needed. However, there needs to be sufficient continuity of staff to minimize any learning curve as issues arise; • It must also have sufficient authority to be able to secure inputs from other parts of the organization (e.g., Finance, IT) as needed, as well as to negotiate with the Project SPV as issues arise; • It is likely to be more efficient to establish a single Unit for all PPPs from that PA.
Constraints addressed:	Cost and efficiency of managing SSPPP contracts.
Advantages:	<ul style="list-style-type: none"> ✓ Reduces the risk of delays, disputes and project failure. ✓ Ensures capacity and expertise needed to manage SSPPP contracts; ✓ Potential to share costs over more than one contract; ✓ Flexible – can outsource less frequently needed skills; ✓ In line with best practice.
Disadvantages:	✗ Cost.
Key risks:	<ul style="list-style-type: none"> • Insufficient attention and resources paid to contract management increases the risk of failure; • Resentment or just lack of co-operation from other parts of the organization; • Lack of high level support once the project is ongoing; • Frequent staff changes means lack of continuity, loss of corporate memory.
Observations:	Again this is good practice for any PPPs. The largest projects justify their own units but for SSPPPs projects can be bundled. This also helps to justify the cost of having a specific unit. For complex government-pays contracts with monthly billing against multiple KPIs this will need at least some full time resource, although there is an option to outsource much of the legwork.

Measure:	Late Payment Penalties
Features:	<p>Many governments adopt one-sided “standard” contracts that provide little or no recourse to Contractors for payment delays. This is a clear contravention of the principle that “risks should be allocated to the party best able to address them” since it places all payment risk (in a government-pays PPP) on the Contractor. Sub-national bodies frequently face constraints on their ability to pay promptly, a particular problem if that is the only source of income for the project SPV. Standard SSPPP contracts for government-pays projects should include the kind of escalating protections and penalties in typical private sector contracts, such as:</p> <ul style="list-style-type: none"> • Stage 1: Interest payable on late payments; • Stage 2: Contractor may withhold services for persistent or chronic delays;

	<ul style="list-style-type: none"> • Stage 3: Contractor may start the dispute resolution process and ultimately terminate. <p>Other methods of addressing payment risk are discussed in Section 4.3.7.</p>
Constraints addressed:	Ability to process payments promptly, payment risk, bankability.
Advantages:	<ul style="list-style-type: none"> ✓ Correct allocation of payment risk in government-pays PPPs; ✓ Incentive for the PA to invest in the necessary contract Management, budgeting and payment systems; ✓ Escalating process.
Disadvantages:	<ul style="list-style-type: none"> ✗ If incurred, penalties increase cost to the PA and reduce VfM; ✗ For chronic delays the SPV may become bankrupt before the escalation process is completed.
Key risks:	<ul style="list-style-type: none"> • Procuring Authorities are likely to strongly resist such measures, which may be seen as impinging on the “traditional rights” of the public sector; • Sets a precedent which may subsequently be demanded for other types of public sector contract.
Observations:	<p>The primary aim of these measures is to incentivize the PA to put the necessary systems in place to make payments promptly. Its power lies not so much in the financial cost but in the desire of the responsible officials to avoid the potential embarrassment of the issue being escalated to higher levels.</p> <p>These measures need not be restricted to SSPPPs. However, the need for them is greater for SSPPPs since the risk of payment delays is greater and the potential impact on the project and private Contractors (as well as on bankability) is more damaging.</p>

Measure:	Upgrade Financial Systems
Features:	Need to ensure that municipality financial systems and standards are suitable for government-pays PPPs that involve regular payments subject to Contractors meeting KPIs. This should be done at national level to ensure consistency of implementation. The specifics will depend on the particular systems in place in that particular country.
Constraints addressed:	Ability to make the correct payments efficiently and without unnecessary delay.
Advantages:	<ul style="list-style-type: none"> ✓ Reduces the risk of penalties and/or disputes for late or incorrect payment; ✓ Addresses key concerns of Contractors and lenders.
Disadvantages:	<ul style="list-style-type: none"> ✗ Reduces the amount of involuntary interest-free working capital financing that Contractors provide to local and municipal authorities through their ability to delay payments.
Key risks:	<ul style="list-style-type: none"> • Procuring Authorities continue to delay payments, for other reasons – measuring Contractor performance against a large and complex set of KPIs each month can be a genuinely difficult task, especially given the likely resource constraints; • Smaller SPVs are unlikely to be able to finance long payment delays, putting the entire project at risk. If an SPV is not used, such delays could bring down the investors themselves, with potentially major impacts on the project. • PPP is relatively high profile, so the reputational risk to the PA and to the entire PPP program is significant.

Observations:	Need to upgrade not only the systems but the people that will be running them.
Measure:	Review Budgeting Process
Features:	government-pays PPP involve a long-term, predictable and contractually committed payment stream. However, government budgeting processes tend to have a short time horizon (usually 1 year) and are sensitive to fluctuations in revenue. The budget process should at least ring-fence and preferably prioritize PPP obligations to avoid creating unnecessary obstacles to the payment of legitimate invoices. There may also be a need to lock-in PPP commitments at a national level, since much of the revenue of sub-national institutions is likely to come from the national treasury rather than local sources.
Constraints addressed:	Availability of funds to pay legitimate PPP contract obligations without unnecessary delay.
Advantages:	<ul style="list-style-type: none"> ✓ Reduces the risk of penalties and/or disputes for late or incorrect payment; ✓ Reduces incentives/opportunities for corruption; ✓ Addresses key concerns of Contractors and lenders.
Disadvantages:	✗ With PPP commitments protected, any fluctuations in available funds will have a greater impact on the rest of the budget.
Key risks:	<ul style="list-style-type: none"> • PPP is relatively high profile, so the reputational risk to the PA and to the entire PPP program is significant.
Observations:	Need to monitor and ultimately limit the combined fiscal impact of PPP commitments to prevent too much damaging volatility in the non-PPP elements. This applies equally at the national level, but the impact is likely to be greater for local/municipal authorities and their ability to deal with it is likely to be less.

Measure:	Contract Manual
Features:	<p>It is good practice for every PPP that a contract manual be prepared after Commercial Close. This translates the legal drafting of what can be a large document, into a clear set of obligations and responsibilities for all parties, and sets out the procedures, templates, etc, needed to translate the contract into a living document.</p> <p>It may help to involve the Contractor in its preparation, since they will also have to live with it.</p>
Constraints addressed:	Ability to manage complex, long term, contracts combining infrastructure and services.
Advantages:	<ul style="list-style-type: none"> ✓ Provides an instruction manual to both parties for managing the contract; ✓ Ensures that key obligations and requirements are met, reducing the risk of disputes, penalties, etc; ✓ Effectively crystallizes the “partnership” component of PPP.
Disadvantages:	✗ Takes time and effort (and therefore cost) to prepare.
Key risks:	<ul style="list-style-type: none"> • Without a clear process, the slightest dispute can quickly escalate to costly legal action that cements in a combative, rather than co-operative relationship between the parties; • Need to ensure that the processes are suited to the scale of the project and take into account the likely cost to both parties. Avoid a “gold plated” solution that costs time and money in endless meetings with unnecessary third parties and

	build in sufficient flexibility to be able to adjust to developments on the ground without necessarily reopening negotiations.
Observations:	While big national PPPs should also have such a manual, it is perhaps even more important at sub-national level given the staff constraints and lack of experience, at the PA and potentially the Contractor as well. Preparation of such a manual should be included as an obligation under the Fast Track process. Ideally it should be included in the scope of work of the Transaction Advisor.
Measure:	Incorporate Data Requirements in the PPP contract
Features:	<p>The cost of data collection can be reduced by incorporating appropriate obligations to automate data collection and automatically provide a feed to the PA. Not all KPIs will be amenable to this, however.</p> <ul style="list-style-type: none"> • When setting the KPIs, as well as being SMART (Specific, Measureable, Appropriate, Relevant and Timely) attention should be paid to the ease and cost of data collection; • The Contractor should be responsible for installing and maintaining the necessary sensors; ideally the information the Contractor will need to collect for their own purposes anyway; • Other types of information (eg random spot checks on the Contractor, public opinion surveys) should be paid for by the PA.
Constraints addressed:	Cost of managing the contract.
Advantages:	<ul style="list-style-type: none"> ✓ Minimizes the cost of monitoring and managing the contract; ✓ Careful selection of KPIs can minimize the additional cost of data collection to the Contractor; ICT can be used to reduce the risk of tampering; ✓ Less risk of disputes if both parties agree on the data .
Disadvantages:	✗ No material disadvantages.
Key risks:	<ul style="list-style-type: none"> • Contractor may try to manipulate data to show themselves in a good light. Automation where possible, plus the right to random spot checks and audits, can mitigate this.
Observations:	Keep in mind the cost to the Contractor of compiling the information and avoid requiring them to make a large investment to get the best possible data when there are cheaper options that can serve the same purpose.

A2.4 Measures to address PA capabilities

Measure:	Central SSPPP Support Unit
Features:	<p>Establish some kind of centralized support unit. This could involve:</p> <ul style="list-style-type: none"> • An SSPPP “window” in a national PPP organization; or • A “sub-national PPP unit” in the national PPP organization or in the ministry responsible for local and regional government. <p>Services available could include:</p> <ul style="list-style-type: none"> • Implementation of other measures identified in this Paper, including: Project Preparation Fund, training, dissemination of information, new financial systems; • Direct technical assistance on specific projects (e.g., participating in Working Teams and Strategy Committees);

	<ul style="list-style-type: none"> • Establish a library of relevant resources and disseminate relevant information; • Encouraging replication of successful projects by actively marketing to other municipalities; • Compiling individual authority plans into a national SSPPP program; • Monitoring and evaluation of programs and projects; • Policy analysis and recommendations to improve the Fast Track program and other measures. <p>A more proactive approach could include:</p> <ul style="list-style-type: none"> • Approval for eligibility for the Fast Track Program; • Final approval of the PPP contract; • Enforcement of standards in the process and transaction documents.
Constraints addressed:	Capacity of the PA to implement SSPPPs.
Advantages:	<ul style="list-style-type: none"> ✓ Supports sub-national Procuring Authorities; ✓ Specific focus on SSPPPs ensures they receive attention and resources at national level – less likely to be neglected and therefore less risk of failed projects; ✓ A focused organization will develop expertise in SSPPPs that can support the future evolution of policies and programs.
Disadvantages:	<ul style="list-style-type: none"> ✗ Cost; ✗ Could draw attention and resources from larger/national PPPs; ✗ “Proactive” option could be interpreted as supporting centralization rather than decentralization.
Key risks:	<ul style="list-style-type: none"> • Could neglect SSPPPs identified by Ministries if the focus is on regional and local government; • Potential overlap/duplication of effort for larger sub-national PPPs that exceed the definition of “small”, such as a new urban metro system; • Potential overlapping jurisdictions between the national PPP agency and the ministry responsible for local government.
Observations:	<p>A central support unit concept is a familiar component of decentralization programs. Examples in the PPP space include Greece (Karaiskou, 2007).</p> <p>The “proactive” options provide a necessary level of national oversight but avoids clogging up the system by acting as the gatekeeper for smaller projects.</p>

Measure:	Regulation Support
Features:	<p>Many PPPs involve “regulation by contract”, where the PA takes on responsibilities over tariffs, quality standards, technical standards, performance monitoring, etc. The expertise required may be quite technical and narrowly-focused and may not be available at local level. Furthermore, it may only be needed occasionally, for a periodic tariff review or for dispute resolution, for instance, so it would not be economic for authority to employ someone full time.</p> <p>Some SSPPPs are considered to be too small to fall under national regulations, since the cost of monitoring and compliance would be too great. For example, a maximum tariff that is set based on costs of the largest operators may be too low for a small rural operation to be viable. In some cases, national regulators issue special</p>

	<p>regulations for qualifying projects, which aim to provide some protection to customers without imposing an impossible cost burden on the provider.</p> <p>Support could be provided centrally, through a national PPP organization, a national sector regulator or the relevant sector ministry. This could include technical assistance, support for regulatory reviews, documentation, etc, where there is regulation by contract.</p>
Constraints addressed:	Know-how and expertise of the PA; affordability.
Advantages:	<ul style="list-style-type: none"> ✓ Improves regulatory standards in SSPPPs, protecting consumers and investors; ✓ Provides specialized expertise that might otherwise be unaffordable.
Disadvantages:	✗ No material disadvantages.
Key risks:	<ul style="list-style-type: none"> • National regulators may adopt too high standards that make SSPPPs non-viable, resulting in no service being provided.
Observations:	As national networks expand there must be provisions for incorporating small projects that were previously off-grid.

Measure:	Capacity Building
Features:	Provision of relevant training, workshops, materials to relevant PA personnel. This should include senior officials (to provide a general understanding of PPPs) and the staff that would be working in the project team and the contract management unit. This should be repeated periodically to allow for staff changes.
Constraints addressed:	Understanding and skills of PA staff.
Advantages:	<ul style="list-style-type: none"> ✓ Raises understanding and standards; ✓ Supports dissemination of the Fast Track process and requirements.
Disadvantages:	✗ No material disadvantages.
Key risks:	<ul style="list-style-type: none"> • High staff turnover requires frequent repetition of training to maintain standards.
Observations:	With limited resources it may be appropriate to prioritize the authorities that are most proactive in identifying and promoting PPPs.

Measure:	Dissemination
Features:	Circulating relevant information to sub-national Procuring Authorities, such as case studies, reports, document templates, designs for replicable projects. Communication of SSPPP successes.
Constraints addressed:	Know-how and expertise of the PA.
Advantages:	<ul style="list-style-type: none"> ✓ Facilitates replication of successful SSPPPs; ✓ Spreads best practices and reduces the risk of errors; ✓ Reduces workload in terms of document drafting.
Disadvantages:	✗ No material disadvantages.
Key risks:	<ul style="list-style-type: none"> • If sensitive information is widely circulated this increases the risk of leaks.
Observations:	Combine a “push” approach, proactively sending information on case studies, etc, with a “pull” approach, providing more sensitive information such as draft contracts, when requested or when it is known a similar project is being prepared.

Measure:	Special contract Structures
Features:	(F. Hobma, 2006) argued that SSPPPs relied more on trust between the public and private parties and cited the Netherlands' Alliance approach that makes greater use of Joint Ventures and Co-operation Agreements.
Constraints addressed:	Know-how and expertise of the PA.
Advantages:	<ul style="list-style-type: none"> ✓ Uses the expertise of the Contractor; ✓ The parties work more closely together, which helps build trust.
Disadvantages:	✗ Non-standard structures may be more difficult to manage
Key risks:	<ul style="list-style-type: none"> • PA may be "captured" by the private Contractor; • JV structures are more open to political interference.
Observations:	Potentially applicable to the smallest projects, such as the puddle pool case study cited by (F. Hobma, 2006). In practice, the added complexity and lack of experience in such non-standard approaches increases the risk of failure.

A.2.5 Measures to Address Contractor Capabilities

Measure:	Outreach/Capacity Building
Features:	<p>Extend outreach and capacity building efforts to potential private Contractors. This could include:</p> <ul style="list-style-type: none"> • Presentations/Q&A sessions on the PPP Program and how to participate; • General workshops on "PPP for the Investor"; • Roadshows in key commercial and business locations, highlighting upcoming opportunities; • Media campaigns; • Conferences. <p>If warranted there could be specific events on SSPPPs and the measures adopted to promote them, as well as how to partner with more experienced/international Contractors.</p>
Constraints addressed:	Understanding and know-how of potential bidders.
Advantages:	<ul style="list-style-type: none"> ✓ Can target specific categories, such as local firms, SMEs, etc; ✓ Also promotes the PPP program in general.
Disadvantages:	✗ No material disadvantages.
Key risks:	<ul style="list-style-type: none"> • If too far in advance of the program there could be a negative impact if opportunities fail to materialize quickly.
Observations:	There needs to be a reasonable size SSPPP program with a steady deal-flow to justify the effort.

Measure:	Pre-qualification - "Know Your bidder"
Features:	Set qualification criteria that are in line with the needs of the specific project. As part of the pre-qualification process, carry out additional research on less-experienced bidders to understand their capabilities. Provide detailed feedback to those that do

	not make the cut and leave the way open for them to partner up with companies that did qualify.
Constraints addressed:	Quality of qualified bidders and ability of the winning bidder to undertake the project.
Advantages:	<ul style="list-style-type: none"> ✓ Smaller projects allow local companies to build experience in PPPs; ✓ Unsuitable bidders are filtered out before they have spent too much on participating in the tender; ✓ Leaves the door open for companies to gain experience through partnering with qualified bidders; ✓ Encourages the least experienced bidders to improve and try again in future tenders.
Disadvantages:	<ul style="list-style-type: none"> ✗ Allowing Consortia to change before final bid submission may require changes to Procurement rules in some jurisdictions.
Key risks:	<ul style="list-style-type: none"> • Setting the hurdles too high could filter out inexperienced companies while the project is too small for larger, more experienced Contractors.
Observations:	<p>This is more to help the PA to filter out unsuitable bidders, but providing detailed feedback to applicants that didn't make it will help them in future tenders.</p> <p>Allowing those that did not qualify to join consortia gives them a second bite of the cherry but should only happen if both parties see a benefit. The PA must take care to avoid giving the impression of endorsing either party.</p> <p>Qualification criteria should be concomitant to the needs of the project; SSPPPs often do not require the same capacity and experience as larger projects, so limiting the field of bidders to the largest and most experienced companies is unnecessary.</p>

A.2.6 Measures to Address Bankability

Measure:	National government Financial Support
Features:	governments can provide financial support to SSPPPs in various ways, including in-kind contributions (land, existing infrastructure and assets), capital grants, loans, equity contributions, Viability Gap Funding (VGF), etc. Providing clarity on the options available for SSPPPs, including qualification requirements, will help Contractors and lenders, and demonstrate government's commitment to SSPPPs.
Constraints addressed:	Availability of financing, revenue risk.
Advantages:	<ul style="list-style-type: none"> ✓ Clarity and transparency; ✓ Greater certainty for bidders and bankers, and for sub-national Procuring Authorities; ✓ Local commercial banks encouraged to participate, helping them to gain experience with SSPPPs.
Disadvantages:	<ul style="list-style-type: none"> ✗ Cost; ✗ Could be interpreted as a "blank cheque", a guarantee of financial support for all SSPPPs.
Key risks:	<ul style="list-style-type: none"> • Procuring Authorities, bidders and banks may treat the support as a guaranteed minimum for every SSPPP, even projects that do not need it.

Observations:	government financial support is justified where a project may lack commercial/financial viability but generates significant economic benefits. Public transport is a common example.
Measure:	SSPPP Window/Credit Line
Features:	Could include a “SSPPP Window” or specific line of credit at state-owned development banks or at one or more local commercial banks. This can be structured to require local commercial banks to participate in the financing.
Constraints addressed:	Availability of financing, revenue risk.
Advantages:	<ul style="list-style-type: none"> ✓ Funds available for lending to SSPPPs; ✓ Local commercial banks encouraged to participate, helping them to gain experience with SSPPPs; ✓ Loans from the SSPP Window/credit line are repaid over time, allowing the capital to be recycled into further loans.
Disadvantages:	<ul style="list-style-type: none"> ✗ Cost; ✗ Lines of credit are made through specific banks – those not included in the scheme would be at a disadvantage.
Key risks:	<ul style="list-style-type: none"> • Procuring Authorities, bidders and banks may treat the support as a guaranteed minimum for every SSPPP, even projects that do not need it.
Observations:	The SSPPP credit line could have significant wider benefits if it draws local banks into PPP finance more generally.
Measure:	SSPPP Guarantee Scheme
Features:	Rather than directly financing infrastructure, government establishes a guarantee scheme for SSPPPs. This could guarantee payments/revenues (for user-pays PPPs), but more typically it would guarantee loan payments. This effectively acts as an insurance policy for commercial lenders, reducing their risk and making them more willing to lend to SSPPPs.
Constraints addressed:	Availability of financing, capacity of local commercial banks.
Advantages:	<ul style="list-style-type: none"> ✓ Guarantees are “revolving” instruments; as loans are paid off the capital is returned and can be used to guarantee further loans; ✓ The “leverage effect” means that a specific amount of capital in the scheme can guarantee loans totaling multiples of that capital; ✓ The “portfolio effect” means that risk to the scheme is spread over a number of different projects; ✓ Encourages local commercial banks to lend to SSPPPs – as they gain experience and understanding of the risks they should become more willing to lend; ✓ Successful schemes can generate income through administration charges; ✓ Easier to include all local banks in the scheme.
Disadvantages:	<ul style="list-style-type: none"> ✗ Requires capital, staff and other resources.
Key risks:	<ul style="list-style-type: none"> • Banks may rely on the guarantee and skimp on their own due diligence, increasing the risk of failed projects and eroding the capital available for future

loans. This can be addressed by setting realistic qualification criteria for the scheme, carrying out its own risk assessment and requiring banks to cover a material part of the risk, so they are incentivized to minimize losses.

Observations: Loan guarantee schemes are common tools for encouraging banks to lend to specific sectors or types of borrower. Saudi Arabia has such a scheme, known as Kafalah, to support SMEs, other countries have schemes to support renewable energy loans. As local banks understand the risk profile of the sector being supported, they become more willing to lend. Many of the more successful schemes therefore include an element of technical assistance and capacity building for the banks themselves, to facilitate this.

Measure: **Outreach/Capacity Building**

Features: Extend outreach and capacity building efforts to include potential lenders. This could include:

- Presentations/Q&A sessions on the PPP Program and how to participate;
- Roadshows in key commercial and business locations, highlighting upcoming opportunities;
- One-to-one meetings.

The focus would be on SSPPPs, the risks and any measures that are being adopted to support the market.

Constraints addressed: Understanding and know-how of potential lenders.

Advantages:

- ✓ Can use the inter-action as a form of market sounding, to obtain feedback on structures, support mechanisms, etc;
- ✓ Also promotes the PPP program in general.

Disadvantages: ✗ No material disadvantages.

Key risks:

- If too far in advance of the program there could be a negative impact if opportunities fail to materialize quickly.

Observations: There needs to be a reasonable size SSPPP program with a steady deal-flow to justify the effort.

Measure: **Early Consultation**

Features: For specific SSPPPs, include potential lenders in the market sounding to gauge their appetite for the project and obtain feedback on the structure and other issues.

Constraints addressed: Bankability, interest of lenders.

Advantages:

- ✓ Ensure structure and risk allocation meets lender requirements, improve bankability and reduce time needed to reach financial close;
- ✓ Consulting local banks improves their familiarity with the PPP program and any specific SSPPP measures that might be adopted;
- ✓ Demonstrates government commitment to the program.

Disadvantages: ✗ No material disadvantages.

Key risks:

- No material risks.

Observations: Particularly important for SSPPPs since local banks are more likely to be leading the financing.

Appendix 3: PPI Data Tabulations

All data sourced from (World Bank, 2019).

Table 14 Trends in Small and large PPPs, 1994-2018 (number of projects)

Project Size (USD)	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
0 - 5 m	24	34	39	51	35	25	16	28	36	27	34	25	22	19	19	15	9	17	23	4	4	9	6	4	4	529
5 - 10 m	19	25	16	25	25	23	23	10	27	29	15	26	23	37	26	24	15	19	21	14	11	9	8	8	8	486
10 - 20 m	30	20	29	61	36	23	26	25	27	38	21	34	38	26	26	21	14	35	45	27	13	17	21	19	12	684
20 - 30 m	15	20	23	59	31	20	15	17	12	21	27	28	18	11	17	20	21	30	28	18	16	25	21	26	12	551
30 - 50 m	27	18	39	61	37	24	20	21	25	14	17	35	40	27	13	32	16	51	63	44	43	42	29	31	43	812
over 50 m	80	99	192	296	196	97	133	97	85	89	69	135	189	208	167	166	211	255	269	214	169	195	172	217	252	4,252
Total	195	216	338	553	360	212	233	198	212	218	183	283	330	328	268	278	286	407	449	321	256	297	257	305	331	7,314

Table 15 Trends in small and large PPPs by investment value, 1994-2018 (USDm)

Project Size	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
0 - 5 m	57	83	95	147	76	66	31	75	89	78	82	70	57	56	56	41	30	59	70	13	13	26	26	12	10	1,420
5 - 10 m	145	179	124	190	211	173	186	79	201	211	109	202	175	277	185	165	102	145	159	115	85	61	62	72	67	3,682
10 - 20 m	458	317	472	935	569	323	386	356	418	570	318	506	555	396	362	290	205	579	644	440	193	255	333	299	182	10,359
20 - 30 m	398	512	587	1,486	804	503	375	418	312	535	689	683	459	286	399	511	523	746	709	430	399	663	538	674	285	13,922
30 - 50 m	1,048	765	1,492	2,493	1,463	970	808	827	964	562	663	1,513	1,639	1,056	530	1,303	576	2,134	2,505	1,830	1,670	1,656	1,168	1,221	1,788	32,644
Over 50 m	23,308	26,849	54,454	96,673	79,295	22,071	45,821	27,817	17,386	32,952	20,317	46,025	64,936	85,045	71,017	84,958	96,678	84,595	124,011	87,204	98,724	100,042	65,231	90,275	85,253	1,630,936
Total	25,414	28,706	57,225	101,923	82,417	24,105	47,607	29,571	19,371	34,909	22,177	48,999	67,820	87,117	72,549	87,266	98,114	88,258	128,098	90,033	101,083	102,703	67,359	92,554	87,584	1,692,964

Table 16 Trends in SSPPPs by World Bank Region, 1994-2018 (number of projects)

Region	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
LAC	73	62	73	172	102	70	54	31	34	14	21	27	24	13	12	22	13	14	22	21	27	33	24	12	26	996
ECA	11	23	25	15	15	2	9	11	8	10	9	10	7	16	11	9	3	21	36	8	5	1	8	8	10	291
EAP	27	15	26	56	24	19	20	42	66	67	65	71	65	71	51	52	26	59	65	51	30	42	30	36	27	1,103
MENA			1	1	4		3		1		1	1	3			1			1		2	7	3	8	2	39
S. Asia	1	11	14	7	9	17	5	8	18	29	13	20	25	17	23	21	27	54	48	25	22	15	11	15	10	465
SSA	3	6	7	6	10	7	9	9		9	5	19	17	3	4	7	6	4	8	2	1	4	9	9	4	168
Total	115	117	146	257	164	115	100	101	127	129	114	148	141	120	101	112	75	152	180	107	87	102	85	88	79	3,062

Table 17 Trends in SSPPPs by sector, 1994-2018 (number of projects)

Sector	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Energy	71	56	44	176	72	72	54	65	79	70	58	76	64	48	48	71	53	119	136	78	61	68	53	62	49	1,803
Water & Sewerage	9	5	11	11	11	11	18	18	26	32	37	42	40	56	44	33	15	17	22	12	20	28	19	20	16	573
ICT	10	31	32	15	18	5	4	10	5	2	2	4	6					1		2		1	5		1	154
Transport	25	25	59	55	63	27	24	8	17	25	17	26	31	16	9	8	7	15	22	15	6	5	8	6	13	532
Total	115	117	146	257	164	115	100	101	127	129	114	148	141	120	101	112	75	152	180	107	87	102	85	88	79	3,062

Appendix 4: UKPFI Data Tabulations

All data sourced from (HM Treasury).

Table 18 Trends in small and large UKPFIs, 1995-2016 (number of projects)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	
0 - 5 m	0	1	1	6	3	4	0	0	1	3	0	1	1	2	0	0	0	0	0	0	0	0	0	23
5 - 10 m	0	0	1	4	2	5	4	6	0	4	2	0	0	1	0	1	0	0	0	0	0	0	0	30
10 - 20 m	0	1	2	5	15	13	12	10	5	4	4	2	1	1	0	0	0	3	0	0	0	0	0	78
20 - 30 m	0	1	2	0	9	13	6	9	9	9	15	3	6	5	2	1	1	2	0	0	0	0	0	93
30 - 50 m	0	3	1	4	5	4	11	13	12	21	6	11	13	4	9	11	8	2	1	0	0	0	0	139
over 50 m	1	7	9	16	16	20	13	13	22	27	22	38	37	18	24	21	14	11	8	6	6	6	1	352
Total	1	13	16	35	50	59	46	51	49	68	49	55	58	31	35	34	23	18	9	6	6	6	1	715

Table 19 Trends in small and large UKPFIs, 1995-2016 (investment USDm)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	
0 - 5 m	-	3	3	24	10	15	-	-	5	11	-	4	5	4	-	-	-	-	-	-	-	-	-	83
5 - 10 m	-	-	6	26	14	37	34	43	-	23	16	-	-	7	-	9	-	-	-	-	-	-	-	215
10 - 20 m	-	11	33	55	211	215	182	144	81	51	73	28	11	15	-	-	-	48	-	-	-	-	-	1,157
20 - 30 m	-	26	42	-	213	311	142	213	213	226	374	81	158	122	44	26	21	51	-	-	-	-	-	2,263
30 - 50 m	-	109	40	140	185	134	413	499	464	805	238	443	514	156	321	446	288	85	37	-	-	-	-	5,320
over 50 m	86	1,183	2,280	2,516	2,113	4,929	1,228	1,996	4,769	4,382	3,342	8,604	6,069	5,327	4,707	2,794	2,326	1,938	1,302	1,089	1,208	156	65,371	
Total	86	1,333	2,403	2,762	2,746	5,640	1,999	2,895	5,531	5,498	4,042	9,159	6,758	5,631	5,072	3,276	2,635	2,123	1,339	1,089	1,208	156	74,410	

Table 20 Trends in small UKPFIs by sector (aggregated), 1995-2016 (number of projects)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL	
Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Water & waste	0	1	1	0	1	0	1	1	1	0	2	0	2	0	1	0	0	0	0	0	0	0	0	10
ICT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transport	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Health	0	1	2	6	11	9	3	12	6	14	5	2	8	2	1	0	0	0	0	0	0	0	0	82
Education	0	0	1	2	5	13	14	12	9	7	5	4	4	2	5	9	3	3	0	0	0	0	0	98
Housing	0	0	0	2	3	2	1	0	1	3	2	1	0	0	0	0	1	1	0	0	0	0	0	17
Other social infrastructure	0	1	3	9	14	15	14	13	11	15	15	8	9	8	5	4	5	3	1	0	0	0	0	153
TOTAL	0	6	7	19	34	39	33	38	27	41	27	17	21	13	11	13	9	7	1	0	0	0	363	

Table 21 Trends in small UKPFIs by sector (disaggregated), 1995-2016 (number of projects)

# of Projects by Sector (Under \$50m)	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total	
Courts							2	2	3															7
DNP								1																1
Emergency Services					2	2	5	5	3	2	3	1	1	1	1	2		1		1				30
Energy																								0
Equipment																								0
Hospitals and Acute Health			1	2	6	11	9	3	12	6	14	5	2	8	2	1								82
Housing (HRA)						1				1	1	1												4
Housing (Military)					2	2		1				1												6
Housing (Non- HRA)							2				2		1					1	1					7
IT Infrastructure and Communications																								0
Leisure Facilities								1	1		2	4	1	1	1		1			1				13
Libraries							1		1		1			1										4
Military Facility				1		1	2																	4
Offices				1		4	3	2	2	1	1	4	3	2	3	1	2			1				30
Other					3	6	1	1	2	2	3	1			2									21
Prisons			1	1	1	1																		4
Roads and Highway Maintenance			3																					3
Schools (BSF)														3	1	5	9	3	3					24
Schools (Non- BSF)				1	2	5	13	14	12	8	7	5	4	1	1									73
Secure Training Centres (YJB)											1													1
Social Care					2		1	2		2	4	2	1	1	1			1	1					18
Street Lighting				1					1	4	1	3	2	3		2	1	3						21
Tram/ Light Rail																								0
Underground Rail																								0
Waste			1	1		1	1	1		2		2			1									10
Total		0	6	7	19	34	39	33	38	27	41	27	17	21	13	11	13	9	7	1	0	0	0	363