Private Sector
Involvement in Water –
Global Lessons

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Summary

Private sector involvement in water has taken many forms, ranging from management contracts to full privatisation. The theoretical rationale is strong – by introducing actors with clear incentives to improve performance, the intended benefits will be delivered to the poor. However, by and large, it has been unsuccessful in delivering these improvements in quality, efficiency, or outreach in the provision of water services. Furthermore, privatisation has also failed to deliver at the level of the enterprise, and despite two decades of donors driving it, the number, size, and intensity of investments have reduced significantly in recent years, particularly in sub-Saharan Africa.

The reasons for this failure can be summarised as flaws in the ambition, design, and execution of projects. In the majority of contexts, a full cost recovery model including infrastructural development is unfeasible, particularly outside of populous urban areas, and yet this was the end goal in most project designs. Private sector operation too was seen as the objective in itself rather than a means to an end. Ultimately, failure to understand the nature of each country and regional context meant that the business case, and the political economy that underpinned it, was not clear at the outset of the project and nor were the mechanisms to adapt to it built in.

In recent years, there have been many new policy tools aimed at overcoming these constraints including PPCPs and various forms of cross-subsidisation. It can also, however, be seen that none of these tools have been universally successful owing to all of the other context specific factors.

Given the clear need for engagement in view of the scale of the problem and the successes that some projects have had, the question is how to scale and replicate what have been small scale successes to date. So far, these projects could be accused of ‘cherry picking’ but success has been seen by adopting a pragmatic approach to professionalisation utilising new public management, rather than privatisation. However, there are opportunities for this to impact at a greater scale.

The importance of micro-politics means that facilitation is likely to be relatively intensive at the local level. However, there are common functions such as finance and the legal framework which are shared between contexts and allow for greater geographical transferability. Policy innovations such as clustering of tenders to blend different levels of profitability may also expedite scale-up, utilising some larger private sector actors. Overall, however, cautionary notes come from experience which steers intervention towards maintaining a focus on the operations and maintenance side of water service provision, as well as remaining focused on small-scale local private sector actors.
Introduction

There is no inherent value in private sector involvement in the delivery of public services when the goal is increasing access, quality, reliability, and reducing price for consumers. Indeed, pursuing decontextualised privatisation in water has, at best, a mixed record. That said, in many ‘merit goods’, the reality is that large numbers of poor people are underserved or unserved and yet are still paying for service, whether through the public or private sector. The consequences of these failures of the water sector to provide are significant, as is the developmental imperative to address them. Millions of people continue to suffer increased mortality and morbidity as a result of lack of access to and quality of water, as well as significant economic losses from transaction costs.

Water was a key sector of interest globally during the period of structural adjustment, and between 1990 and the mid-00s there were experiments with private sector involvement in the sector on every continent. Indeed, the IFC has lent more than $75Bn in soft loans for the privatisation of water since 1995. These engagements appeared to reach a head around 2005 when it became clear that the experiments had, by and large, failed, despite clear normative economic rationale. Around this time, former proponents such as the World Bank and the Asian Development Bank began to adopt a more nuanced and cautious approach. While private sector involvement has decreased since the mid-00s, paradoxically the proportion of people globally obtaining water from private sources has increased from 5% to 13% (Bakker, 2013). These generalised lessons come from a large-scale analysis of private sector involvement in a range of countries, some at the national level and others focused on urban areas (annex 1).

What is private sector involvement?

Private sector participation is a continuum from short-term operational engagement to full asset transfer. Table 1 shows a categorisation of private sector involvement by function performed.

<table>
<thead>
<tr>
<th>Asset Ownership</th>
<th>Service Contract</th>
<th>Management Contract</th>
<th>Lease/Affermage</th>
<th>Concession</th>
<th>Build-Operate-Transfer</th>
<th>Divestiture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Public/Private</td>
<td>Private</td>
</tr>
<tr>
<td>Capital Investment</td>
<td>Public</td>
<td>Public</td>
<td>Public</td>
<td>Private</td>
<td>Private</td>
<td>Private</td>
</tr>
<tr>
<td>Commercial Risk</td>
<td>Public/ Private</td>
<td>Public</td>
<td>Shared</td>
<td>Private</td>
<td>Private</td>
<td>Private</td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Public/ Private</td>
<td>Private</td>
<td>Private</td>
<td>Private</td>
<td>Private</td>
<td>Private</td>
</tr>
<tr>
<td>Contract Duration</td>
<td>1-2 years</td>
<td>3-5 years</td>
<td>8-15 years</td>
<td>25-30 years</td>
<td>20-30 years</td>
<td>Indefinite</td>
</tr>
</tbody>
</table>

Table 1: (Budds and McGranahan, 2003)
Of these categories, in the first decade of privatisation (1990-2001) 44% of projects were concessions, 28% BOT, and 20% were management/lease/affermage. Since this time, the level of investment of commercial actors has decreased, and engagement has tended towards service or management contracts. Further, participation in Africa has been a fraction of that in Asia and Latin America.

Figure 1: Private sector involvement in water supply by region (1984-2010). Source: World Bank in Bakker (2013)

Figure 2: Private sector involvement in water supply, number of projects and total investment (1984-2010) Source: World Bank in Bakker (2013)
Figure 2 demonstrates the decrease in both the number of projects and the level of investment in recent years. The fall in average investment level of projects is reflective of a move away from infrastructural investments to the more management-oriented end of the engagement typology.

Has it worked?

To characterise the evidence, on one side there are seen to be price increases, continuing access problems, job losses, excessive profits, and corruption while on the other side positive impacts of increased coverage, increased investment, decreased child mortality, better customer service, disproportionately pro-poor impact, and increased water quality have been seen (Benitez et al., 2001; McKenzie et al., 2003; Galiani et al., 2005; Prasad, 2006). There are also many studies which directly contradict each other with regard to the impact on incomes, access, prices, and jobs in the same project context (Megginson and Netter, 2001; Bayliss, 2002; Birdsall and Nellis, 2003; Hall et al., 2005; Trujillo and Estache, 2005; Mulreany et al., 2006; Casarin et al., 2007).

Overall, Prasad’s review of private sector involvement to 2005 concluded that just 250,000 connections were added globally in the first 15 years of privatisation. This represents a very poor return on investment. Many major projects were renegotiated or cancelled. This has occurred despite widespread recognition of ‘cherry picking’, which involves choosing the project areas most likely to succeed in order to demonstrate the concept.

In terms of enterprise performance:

[Private companies have selectively withdrawn from some regions to focus on higher profit, lower risk regions, countries, cities, and even neighbourhoods” (Bakker, 2013; 258)]

While in terms of poverty reduction and increasing access for the poor:

[There is little evidence that the private sector is interested in serving low-income groups, or that they are any better off under privatisation (Prasad, 2006; 109)]

This has led some, such as Mulreany et al. (2006) to conclude that privatisation is not a good policy option for improving access and public health.

Failures are particularly clear in sub-Saharan Africa. The only successes noted in the main privatisation period up to the mid-00s were Senegal and Ivory Coast. Metrics included water quality, reliability, non-revenue water (NRW) levels, and the number of new connections. Even here, though, the actual number of connections decreased despite an increase in new connections, as those least able to pay were disconnected (Hall and Lobina, 2006).
There have, however, been some successes. In a story typical of existing case studies, Hirvi and Whitfield (2015) document Ghana’s experience where water connections and customers increased, labour productivity improved, job descriptions were specified, training was provided, reporting procedures were clarified, the water operator’s financial situation improved and water rationing improved reliability. However, as with all documented success stories, this success was not unqualified. The contracted NRW target was not met, meter installation and mass investment programmes were still in government hands and were slow which affected targets, and corruption and illegal connections continued to undermine efficiency.

It is worth noting that, despite questionable evidence, private sector participation continues. Aquanet, a Dutch management contractor, runs 15 year O&M contracts in Senegal and Rwanda on an operate transfer model which includes training local people in how to run the system.

Why?

If the business case for the success of private provision of water services is so strong, why does it, by-and-large, continue to fail and what, when intervention does succeed, are the common factors?

Business case

The first question is the business case itself; how sound is it?

The OECD (2009) argues that the failure of private sector participation in water supply is due to a misunderstanding of risk factors. Ameyew and Chan (2015) examine the common risk factors in engaging in PPPs based on a survey of key stakeholders.
The three key categories of risk are identified as financial/commercial; legal and socio-political; and technical. The majority of risk is financial/commercial, primarily associated with profitability due to exchange rates and NRW. The most significant individual risks are foreign exchange rates, corruption, and water theft. Some of these are macro-economic variables where local actors have little control but some are due to socially and politically defined behavioural norms. Where private sector involvement does involve foreign investment, the impact of the exchange rate, which is often volatile in developing countries, is significant. This was partially responsible for the collapse of PPPs in Argentina during the financial crisis of the late 1990s (Prasad, 2006). Overall, it is clear that in many cases, for investors, the business case is not strong.

Conversely, as an example of a behavioural norm which might not be visible prior to engagement, there are frequently informal practices of allowing those who cannot afford to pay for water to take it for free. When a private sector actor formalises provision bringing down prices overall but eliminating NRW, the attitude of local people towards the enforcement of formalisation and its impact on the poor might make enforcement problematic. Corruption too, is endemic in many developing countries and can significantly undermine the potential for commercial success of businesses.

<table>
<thead>
<tr>
<th>Critical risk factor (CRF) and category</th>
<th>Risk impact</th>
<th>Overall ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial/commercial (PRF 1): $u_1$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign exchange rate, $u_{11}$</td>
<td>5.38</td>
<td>1</td>
</tr>
<tr>
<td>Water theft, $u_{12}$</td>
<td>5.16</td>
<td>3</td>
</tr>
<tr>
<td>Non-payment of bills, $u_{13}$</td>
<td>5.13</td>
<td>4</td>
</tr>
<tr>
<td>High operational costs, $u_{14}$</td>
<td>4.90</td>
<td>6</td>
</tr>
<tr>
<td>Inflation rate volatility, $u_{15}$</td>
<td>4.80</td>
<td>9</td>
</tr>
<tr>
<td>Interest rate, $u_{16}$</td>
<td>4.60</td>
<td>13</td>
</tr>
<tr>
<td>Water pricing and tariff review uncertainty, $u_{17}$</td>
<td>4.53</td>
<td>17</td>
</tr>
<tr>
<td>Financing and refinancing risk, $u_{18}$</td>
<td>4.52</td>
<td>18</td>
</tr>
<tr>
<td>Legal and socio-political (PRF 2): $u_2$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corruption, $u_{21}$</td>
<td>5.35</td>
<td>2</td>
</tr>
<tr>
<td>Political interference, $u_{22}$</td>
<td>5.07</td>
<td>5</td>
</tr>
<tr>
<td>Supporting utilities risk, $u_{23}$</td>
<td>4.64</td>
<td>12</td>
</tr>
<tr>
<td>Political discontent &amp; early termination, $u_{24}$</td>
<td>4.58</td>
<td>14</td>
</tr>
<tr>
<td>Conflict between partners, $u_{25}$</td>
<td>4.54</td>
<td>16</td>
</tr>
<tr>
<td>Land acquisition risk, $u_{26}$</td>
<td>4.51</td>
<td>19</td>
</tr>
<tr>
<td>Public resistance to PPP, $u_{27}$</td>
<td>4.49</td>
<td>20</td>
</tr>
<tr>
<td>Change in government &amp; political opposition, $u_{28}$</td>
<td>4.46</td>
<td>21</td>
</tr>
<tr>
<td>Technical (PRF 3): $u_3$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pipeline failures during distribution, $u_{31}$</td>
<td>4.86</td>
<td>7</td>
</tr>
<tr>
<td>Lack of PPP experience, $u_{32}$</td>
<td>4.86</td>
<td>8</td>
</tr>
<tr>
<td>Construction time &amp; cost overrun, $u_{33}$</td>
<td>4.76</td>
<td>10</td>
</tr>
<tr>
<td>Poor contract design, $u_{34}$</td>
<td>4.64</td>
<td>11</td>
</tr>
<tr>
<td>Design &amp; construction deficiencies, $u_{35}$</td>
<td>4.56</td>
<td>15</td>
</tr>
<tr>
<td>Insufficient operator performance at operation, $u_{36}$</td>
<td>4.42</td>
<td>22</td>
</tr>
</tbody>
</table>

Table 2: Classification of critical risk factors
There are many additional context specific factors which prevent the market forces from strengthening the business case. Particularly in sparsely populated rural areas, it is clear that there may not even be a sound business case for a private investor to operate a management or service contract, let alone any infrastructural investment (Kleemeier, 2010).

Political Economy

If the intended policy is not contextualised within the appropriate pattern of social governance, it is doomed to be rejected…History…suggests there is no one-size-fits-all solution (Prasad, 2006; 683-685)

As the most politically charged of all sectors, understanding the political economy of water within a very specific context is vital to the success of projects. The incentives and institutions to deliver change in a given context are the only real factors that matter, as other barriers can be overcome (Hirvi and Whitfield, 2015).

One key driver or blocker of change is political power. Both democratic and autocratic societies have formal and informal means of creating, maintaining, and changing power structures. Water, and the positions of power surrounding it, are frequently used tools to exercise this power.

There are also important political economy factors in people’s attitudes towards the private sector. With water commonly viewed as a human right, when people are seen to be profiting from its provision, even if that provision is now more comprehensive and inclusive, water becomes an easy scapegoat, which politicians can easily sacrifice. This was evident in South Africa, where public outcry over a cholera outbreak which blamed the privatisation of water services but was actually unrelated, resulted in the government distributing free water and caused a collapse in the businesses of private contract holders (Prasad, 2006).

Policy responses to overcome challenges

Involvement of the private sector in water supply is not a new phenomenon. What is new is the belief that the private sector could be the sole solution for water problems (Prasad, 2006; 683)
In the decade since Prasad’s review, the need for an appreciation of context is now far more widely appreciated (Vives et al., 2009; Pahl-Wostl, 2015). However, the record of external influence over these behavioural factors is poor.

*Donor-inspired reforms and policies to tackle corruption and increase public sector accountability often achieve little, because they do not address the underlying circumstances that drive political corruption and clientalism* (Hirvi and Whitfield, 2015; 138)

Paradoxically, private sector participation in water has been shown to be most effective when government is weak and corrupt but the regulation necessary for success is most likely to be inefficient in those countries where the bureaucracy is corrupt (Prasad, 2006).

It is clear from the above analysis that context matters and part of that is an appreciation of the incentives of different stakeholders involved in the process. Indeed, the Asian Development Bank has now stated that the greatest impact from private sector involvement will be ‘small and local’ as opposed to involving large multinationals. One policy response to the need to involve local actors more in the decision making process and the execution of water services projects is the public-private community partnership (PPCP), the features of which are characterised in table 3.

<table>
<thead>
<tr>
<th>Role</th>
<th>Public Government</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitator</td>
<td></td>
<td>Private</td>
</tr>
<tr>
<td>Expedite project clearance</td>
<td></td>
<td>Industry</td>
</tr>
<tr>
<td>Credibility to the initiative</td>
<td></td>
<td>NGOs</td>
</tr>
<tr>
<td>Funding of the project</td>
<td></td>
<td>Community</td>
</tr>
<tr>
<td>Implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical expertise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initiator of project</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop and implement business model PPCP projects</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interface between community and other stakeholders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grassroots efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mapping of local requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity building</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Awareness of PPCP relevance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expression of needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultimate beneficiary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operation and maintenance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: Confederation of Indian Industry (2010)*

Table 3: PPCP Roles. Source: (Erakovich et al., 2013)

In general, these partnerships have yet to show any clear advantages over other PPP models. While they are intended to empower local people, in reality they have created expensive and inefficient delivery mechanisms, where poor communities are faced with the same problems as private operators but without the requisite skills to address them (Bakker, 2013; Cheng, 2015).
Zhang et al (2005) attempt to adopt a more pragmatic approach to the questions of how to simultaneously address political economy and business case questions. Recommendations include sequencing; establishing a regulatory authority and competition prior to privatisation, and a range of specifically tailored distributive policies on tariffs. Options here include:

- Rising block tariffs (lower tariffs for the first designated volume)
- Social or welfare tariffs (flat rate for low income hh)
- Banded charges – lower tariffs for low income neighbourhoods
- Lifeline tariffs – designated volume provided free of charge
- Means tested subsidy has also been used (as in Chile)

The potential for cash-for-work type interventions is also examined, but was ultimately deemed a failure in the context of the disastrous Buenos Aires and La Paz privatisation experiments.

Another variant on these socially-oriented models which appreciate the lack of commercial viability in some areas is clustering. In Burkina Faso, for example, areas which are not commercially viable are tendered in a package with those that are. Operators must improve metrics across areas within their contract in order to receive their fees as a form of cross-subsidy.

**Conclusions**

This review has shown that there is little consensus and no silver bullet. However, there has been an alignment, based on an appraisal of experience, around certain key issues.

On ownership, as summarised by Bakker (2010)

> ‘ownership’ (i.e. public versus private) is less important than institutions (rules, norms, and laws) and governance (decision-making processes); it follows that the imposition of ‘public’ or ‘community’ management is not a sufficient condition for better water services (245)

And the link between ownership and governing principles is also clear

> It is now accepted that it doesn’t matter who controls the network, but that it should be run like a business with equity principles ...who provides the service is not the main factor in ensuring equity. The important thing is whether the service provider has the right incentives and how accountable they are to the general public (Prasad, 2006; 686)

So the question is how to respond to the specific challenges of the local context to arrive at a system configuration which is more closely aligned with incentives for better delivery.
Implications for Development Programming

Some of development intervention in the water sector has been successful and more pro-poor and sustainable than many other purely private sector ventures to date. Based on this analysis of private sector participation in water, there are some factors which can be seen as key.

There is definitely an element of ‘cherry picking’ which has been common to successful programmes. Demographic and ecological conditions can make the business case for success far stronger in some regions than others. There is also an element of cherry picking in the area of political economy. Areas with friendly governments at the local or national level, as well as a direction of public opinion which is conducive to reform, are far more likely to see success.

Critiques of failed projects show the need for a pragmatic and tailored approach to different configurations of a professionalised service provision system. This avoids the pitfalls of ideology by including a range of public, private, and community actors in finding locally appropriate solutions. Water Users’ Associations (WUAs), for example, have been one of many predetermined solutions promoted and supported by development actors which are seen to have failed in many contexts. However, the failures, like the successes, have neither universal causes nor are their constraints intractable and, as such, in some contexts, WUAs have been given the opportunity to participate as professional water operators. If successful, this can also overcome some of the political economy issues that are raised by private sector involvement, at the same time as introducing de facto competition in PPP tendering processes. Lessons from the new public management paradigm have been more influential than those of the neoliberal paradigm (Lane, 2000).

It is worth noting that a key factor for success was the absence of a common approach. Indeed, what allowed different interventions to be successful was that the mix and nature of the model was bespoke to the institutions, organisations and individuals in a given area as well as the facilitation tactics that were employed in each scenario.

Obstacles to scale-up

The main challenge to scale up is this plurality in the intervention approach. This analysis has shown that context specificity is the single biggest driver of success.

Part of arriving at these different conclusions as to the local appropriate configuration of sustainable water service provision was a ‘hands-on’ facilitation approach, with intensive analysis at a local level. Securing political buy-in at all levels from WUAs right up to regional and national governments has required intensive negotiation and coaching the intervention staff, whether they were from
development programmes, civil society organisations or from government. This is evidently something which is resource intensive and represents a challenge for scale-up.

Another major challenge in scaling up is infrastructure. If successful programmes can be said to have shown that professionalised water services under different configurations can expand outreach and quality of water services, then the prerequisite for that is a minimum level of infrastructure. As in all of the experience documented above, it is unrealistic to expect a full cost recovery model including capital investment and it is unlikely that the private sector will be willing to invest in the more intensive forms of engagement given the challenges outlined. In other areas, there are infrastructural constraints which prevent simple service, management, or lease contracts from being attractive. In addressing this, the public sector has a significant financing gap. In order to bridge this gap to make professional provision of services a more attractive prospect, someone has to fund some infrastructural development.

This is where innovative financing schemes are a possible area of interest, particularly in urban areas. Commercial Banks and other finance providers are beginning to reassess the creditworthiness of water service boards and even lower level community projects. If the evidence has shown that small local providers are more appropriate contractors under PPPs than larger multinationals, and that infrastructural development is unlikely to be feasible under PPPs, then the professionalisation of these small local providers requires the development of new and appropriate financing. These are not loans for large scale investment but pre-financing of inputs in the short-term, funds for training staff or roll-out of metering systems, for example. Formal financial systems are not currently equipped with adequate information to provide these services.

As articulated by Zhang et al. (2005), sequencing is important, and translating small scale successes to impact at the national regulatory level will be key to translocal replication.

**Guidance for programming**

Given the chequered history of private sector involvement in the water sector but mindful of the scale of the problem at hand, external actors are obliged to continue engagement in this area but to do so judiciously. According to the evidence presented here, there are a few key lessons which act as recommendations for scaling success in this area.

**Realistic focus** – if intervention is focused on increasing access, it needs to be clear about the objectives of professionalising water service provision, as opposed to privatising water or unrealistically targeting full cost recovery.
**Sequencing** – first create the space at the national level using appropriate leverage points to gain formal buy-in at the local level.

**Act local** – there is unlikely to be any substitute for active facilitation and developing bespoke settlements at the local level. However, opportunities for replication should be sought through looking for actors with appetite for scale up. This may be made possible by clustering of viable and non-viable areas to off-set private and public incentives.

**Scale learning** – while facilitation will be most effective at the local level, individual contexts share wider regional or national context. Acting locally but continuously evaluating wider applicability provides opportunities for more system-wide impact. Working with financial providers to develop more bespoke products or credit-scoring systems suitable for small water service providers may be a national solution to a constraint felt at a local level. Utilising inter-regional learning platforms may provide local governments with sufficient incentive to perform the honest broker role of a development actor in the longer term, and there may be opportunities for specialists in this area to develop more commercially oriented services to regional governments.
References


HALL, D. & LOBINA, E. 2006. Pipe dreams: the failure of the private sector to invest in water services in developing countries. *PSIRU Reports*.


Annex 1: Countries considered in review

1. Burkina Faso
2. Ghana
3. Argentina
4. Philippines
5. Senegal
6. Mali
7. Rwanda
8. Kenya
9. India
10. South Africa
11. Ivory Coast
12. Cape Verde
13. Gabon
14. Central African Republic
15. Gambia
16. Guinea
17. Niger
18. Tanzania
19. Chad
20. Mozambique
21. Sao Tome and Principe
22. Uganda
23. Malaysia
24. Indonesia
25. China
26. Bolivia
27. Vietnam
28. Thailand
29. Turkey
30. Zimbabwe
31. Pakistan
32. Colombia
33. Chile
34. Trinidad and Tobago
35. Belize
36. Brazil
37. Guinea Bissau
38. Morocco
39. Democratic Republic of Congo