

Current issues in Private sector participation (PSP) in water services

Naren Prasad¹

United Nations Research Institute for Social Development (UNRISD)

Abstract

Privatization of public infrastructure became the *mantra* of many development agencies since the late 1980s. Water supply was not an exception and different forms of private sector participation (PSP) in water supply have been experimented. Among the policy circles, privatization became the objective in itself rather than a means of increasing access or helping the poor and increasing the overall performance of the economy. This article examines the results achieved by these experiments. The evidence shows that PSP has mixed results and private sector is not more efficient than the public sector. It also shows that in most cases PSP did not deliver as it was expected. Despite growing failures and increasing public pressure, the article concludes that PSP debate is still alive, but repackaged through different forms.

¹ Naren Prasad is Research Coordinator at the United Nations Research Institute for Social Development (UNRISD), email prasad@unrisd.org, Palais des Nations, 121 Geneva 10, Switzerland
Acknowledgment: Very useful comments were provided by Thandika Mkandawire and colleagues at UNRISD.

Introduction

It is an established fact that performing public utilities infrastructure (water, roads, telecommunications, port, airport, electricity) leads to better economic performance and poverty reduction. In order to better develop their infrastructure countries have different models in place in terms of the degree of private-public sector involvement for such services. Whereas there seems to be general consensus among policy makers and experts for the State to disengage from the telecommunications and electricity sector, there is disagreement regarding the State's role in the provision and supply of water services. Public utilities infrastructure, especially water, is unavoidably social in nature and draws such political emotions, like no other issue. Privatization and its varieties like PSP² in water services is based on the neo-liberal strategies.

The neo-liberal strategies mainly emphasizes on the importance of the market, fiscal discipline, trade, investment and financial liberalization, deregulation, decentralization, privatization and a reduced role of state (Robison and Hewison 2005, p. 185). Certain other strategies such as a limited welfare state, flexible labour market, and restrictive fiscal policies have been given priority over social policies. These strategies are also referred to as the *Washington Consensus*³. PSP was introduced in developing countries as the linchpin of the Washington Consensus, which was proposed mainly on the competition and efficiency argument. It was argued that PSP will bring in the much needed investment, increase access, and improve quality of the water supply. Historically, most water system in developed European countries was initiated by the private sector. Today it is the public system which provides water & sanitation in most of the countries. It is estimated that over 90% of the world's population is currently supplied by the public sector. The funding generally comes from taxation, borrowing and user fees.

After over 15 years of experimentation with various forms of PSP in the water supply, it is time to take stock of the results. This article will evaluate the lessons learnt from 15 years of PSP in the water supply based on empirical evidence and literature review. It will particularly investigate the impact of PSP on access and impact on the poor. In doing so, this article also aims at presenting a state of the art and current issues facing the water supply in developing countries. Evidence gathered shows that PSP has not achieved the desired results, especially in the developing countries and there is increasing failure and difficulties. Despite growing failures and increasing public pressure, the article concludes that PSP debate is still alive, but repackaged through different forms such as public-private partnerships (PPP).

² Private sector in this article will imply mainly multinational firms involved in the water supply which has commercial objective of making profit.

³ John Williamson (1994) was the first to coin this term, referring to the orthodox economic policies promoted by the US Treasury, the International Financial Institutions, IMF and the World Bank (all based in Washington). It should be reminded that he argued that neo-liberalism should not be synonym for Washington Consensus.

Current context

Private sector participation (PSP) in water is one of the most controversial debates of the development discourse today. On one side are the proponents who argue that since government has failed in providing access to everyone, private sector can solve this problem by using the market principles. Those who advocate the involvement of private sector in water supply (development agencies like the World Bank, international financial institutions, bilateral donors, professional associations and some scholars) argue that private sector will improve efficiency, increase extension of service, bring in more investments, and will relieve governments from budget deficits (World Bank 2004a)⁴. It has been argued that because of lack of funding to improve the water infrastructure, developing countries are caught into the “*low-level equilibrium*”, implying low operational efficiency leads to low quality service (Anwander and Ozuna 2002). In order to break this circle PSP is the solution.

On the other side of the spectrum are those who consider that water is a common good and should not be in the hands of the private sector. They argue that since water is unlike any other resource and because of the fact that water is the essence of life itself, it should *not* be treated like a commodity based on market principles. The private sector cannot apply a just criteria for this basic need. Access to water for everyone then becomes a human right and it is the State’s obligation to provide this vital resource to everyone. This notion of human right goes back to the Enlightenment era where Hobbes (1588-1679) and Locke (1632-1704) had argued that it is the obligation of the State to uphold, protect, promote and enforce rights. But does the State have the capacity to deliver this service to everyone?

Each side has a passionate argument, whether water should be commodified based on market principles or whether water is a social good therefore in the public hands. And then there is another group who are caught in between these two opposing views. This group thinks that solutions can be found by considering water as an economic good and a human right at the same right. The truth may be found somewhere here. It is important to set the context in which these debates take place.

The neo-liberal⁵ argument, which is based on free market principles to solve the problem of water, has been gaining grounds since the 1980s. This neo-liberal position was given life during the Thatcher and Reagan era (1980s), which was later propelled through the so-called *Washington Consensus* argued that PSP in public utilities should be a preferred policy over state involvement. After the experience of privatizing water utilities in the UK and other developed countries, PSP was prescribed to developing countries.

⁴ World Bank. (2004a). Water Resources Sector Strategy: Strategic directions for World Bank engagement, IBRD/World Bank, Washington DC.

⁵ The neo-liberal position is based on free trade in free and unrestricted market and private property. It should be noted that arguments in favour of private sector must originate from Adam Smith (1723-1790), who preferred that the private sector should be involved in business and not that State. Later, Hayek (1899-1992) took the relay from Smith’s liberalism and gave it a new intellectual momentum, which became neo-liberalism. However, one small point is that Adam Smith recognized the importance of water and he has reservations that if the private sector was involved in the provision of water, this could lead to unwarranted risks (Smith 1976:33).

The critics of this neo-liberal have generally focused their efforts in demonizing the private sector and the profit seeking motives of large corporations. The private sector responded by proposing (or accepting) certain forms of *corporate social responsibility*. The major opposition which comes from the *rights-based approaches* of water, has been relatively weak in substance and heavy in rhetoric. In general, three groups of critics of neo-liberals argument in water supply can be identified for analytical purpose:

- Academics, mainly economists who do not question the PSP *per se*, but criticize the sequencing of the privatization reforms, such as Joseph Stiglitz, Paul Krugman, David Parker, Colin Kirkpatrick, ... This group also calls for better regulation of the PSP.
- Those who believe that the public sector can do the job better if given the resources, such as the Public Service International (which is the global federation of public sector unions), David Hall from Public Services International Research Unit, Transnational Institute,...
- Those who criticize it on ideological grounds, which comprises mainly of NGOs such as WaterAid, Polaris Institute, Council of Canadians, World Development Movement, Public Citizen, and some academics.

On the other side, the pro-privatization group is well organized. There are a few pro-privatization international lobby groups such as the World Water Council, World Business Council for Sustainable Development, International Chamber of Commerce, Business Action for Water, World Economic Forum.

Equity in and access to water services

Issues surrounding water and poverty have now been recognized as something crucial by the international community as evidenced by the Millennium Development Goals (MDG). Target 10 of MDG aims to “*Halve by 2015 the proportion of people without sustainable access to safe drinking water and basic sanitation.*” According to various estimates compiled by the World Water Council (2006a), around 10 billion USD per year would be needed to deliver basic water and sanitation to the people who do not have currently access. In other words, the current levels of investments would have to be doubled in order to achieve the target 10 of MDGs (i.e. to halve by 2015 the proportion of people without sustainable access to safe drinking and basic sanitation).

All developed economies provide some sort of income support to help the poor afford water supply (OECD 2003a, p. 34). In addition, these countries have also put in place mechanism to help the general population and they have policies targeted to selected groups, such as the poor, large families, older people. These measures include VAT reduction, progressive social tariffs, eliminating disconnections, eliminating annual fixed fees, targeted assistance to poor people such as free water up to a defined volume, forgiveness in arrears, and grants. However, according to OECD (2003a, p. 34) it is argued that the impact of such social policies is limited since the aid is relatively small and the level of poverty minimal in these countries. In another publication OECD (2003b, p. 18) argues that such social policies in tariffs contribute to economic efficiency, resource conservation and equity goals. Such social policies

would be more appropriate in developing countries where the level of poverty and inequality is high.

Linked to the equity issue is the question of *access*. Over 1.1 billion do not have access to safe drinking water worldwide and over 2.6 billion do not have access to sanitation services. On the positive side, 83% of the world's population have access to improved drinking water (WHO and UNICEF 2004). Those who are not connected to the water supply system, often resort to purchasing water from independent providers, often at excessive high prices. And those who cannot afford it, use unsafe polluted water for consumption and there are over 1 billion of them. WHO estimates that around 2 million people die every year due to diarrhoeal diseases (90% of them are children under 5), which places diarrhoeal disease as the 6th highest burden of disease on a global scale (WHO 2003, p. 1). Around 4,000 children die each day because of water born diseases. And this leads to a vicious cycle for the billions of people who are locked in a cycle of poverty and disease (WHO 2005). In other words, poverty leads to deprivation, which leads to consuming unsafe water, which leads to diseases, and inability to work, leading to increased poverty. This poverty trap can clearly be overcome by having access to safe water.

Going back to our initial concern about PSP in water, what is the premise of this argument? How did it all start? Its important to take a look at what the theory about privatization says.

Why privatize? Theory of privatization

Privatization is a political strategy which creates new rules and new roles between the State, market, and the civil society. According to Savas (1987), there are four types of privatization: ideological (less government), populist (better society), pragmatic (effective solutions), and commercial (more business).

As mentioned above, it is argued that private ownership is more efficient in delivering services compared to the State. In other words, privatization takes place to increase economic efficiency (Yarrow 1999, 162). According to Sheshinski and Lopez-Calva (2003, p. 430), there are four major objectives of privatization:

- To achieve higher allocative and productive efficiency
- To strengthen the role of private sector in the economy
- To improve the public sector's financial position
- To free resources for allocation in other important sectors such as social policy.

The theory of privatization is an offshoot of the broader issue of ownership and the role of government and regulation (Megginson and Netter 2001, p. 329). It is also argued that "*divestiture and other related reforms can substantially improve economic performance...*" (Yarrow 1999, p. 157). Adam Smith also preferred that economic activities should be in the hands of the private sector, which will also help the State in having a better financial position (Sheshinski and Lopez-Calva 2003, p. 432). The initial assumptions were that there are no externalities, not a public good, the market is not monopolistic, and no asymmetry of information (Megginson and Netter 2001, p. 329). In other words, privatization becomes less compelling in these circumstances. This is exactly the case for water supply, which presents all these exceptions and is

considered a *natural monopoly* (this concept was introduced by John Stuart Mill (1806-1873)). With all these exception from a theoretical perspective, *is* the argument that PSP in water supply will increase investment and efficiency becomes still justified?

According to Balance & Taylor (2005, p. 12) the natural monopoly of water industry is no different than electricity transmission and distribution. However, a key difference is that upstream production and distribution does not exist in the water industry since a customer can be supplied through using other supply alternatives such as borehole, large individual reservoirs. In addition to the high capital intensity, the water industry also has high sunk costs. Since water is affected by the weather and because it depends on the nature, long term storage options becomes problematic, especially in times of draughts. Since water does not have substitute, and is directly linked to public health and environmental concerns, affordability is one of the key concerns. All this leads us to show that the water industry is an unusual business and does not fit into standard economic theory regarding competition. It is argued by Balance & Taylor (2005, p. 18) that even if competition were possible, the benefits of such competition would be minimal.

Poverty and privatization literature

Studies dealing with efficiency of private versus public ownership reveal that there is ambiguity and there is no clear relationship. A decade ago, privatization was “heralded as an elixir that would rejuvenate lethargic industries” and revive stagnating economies (Kessides 2005, p. 86). Today, there is an outright rejection of privatization all over the world mainly because of price hikes and affordability issues, access, redundancies, and in some cases exorbitant profits for firms and corruption.

Studies on privatization can be divided into two groups: one that consists mainly of econometrical and statistical work and the other consisting mainly of case studies⁶. The econometrical work generally demonstrates that privatization (measured in terms of ownership) had a positive impact on the economic performance, especially from the micro-economics perspective. However, cross-country econometrical studies have been inconclusive. On the other side, the case studies demonstrate that there have been some improvements (especially productivity and profit) but the process is much more complex and the benefits are not automatic.

In general, both methods show that privatization contributes to improving performance at the firm level and that privatization alone is insufficient to increase economic performance. Ownership itself does not mean better performance. It is also not clear whether the private sector has improved coverage and access for the poor sections of the community. In most of the econometric studies, it is demonstrated that other structural reforms such as regulation plays a crucial role (Parker and Kirkpatrick, 2005). One important contribution of the case studies approach demonstrates that social and institutional context are more important for the privatization to be successful.

⁶ For more details see Parker D., and Kirkpatrick, C. (2005).

Some selective academic literature will be used to analyze issues of poverty and privatization. Benitez et al (2003) have found that all categories of the population benefit from access and coverage improvements, efficiency and quality for the case of Argentina. In addition, it is the poor who benefit the most from access and productivity increase. McKenzie and Mookherjee (2003, p. 212) demonstrate that there is no clear evidence of price increase and increase in poverty in countries that had PSP, especially for the case of Latin America. However they do find negative impact on jobs losses, which according to them were relatively low compared to the nation wide employment. Bayliss (2002) on the contrary, although anecdotal, emphasizes that privatization has had a negative impact on the poor in terms of job loss, decrease in income and reduced access to basic services. However, to get a clearer picture, privatization should be assessed in its economic, historical and social context (p. 619). Birdsall and Nellis (2003) show that privatization has indeed aggravated the asset distribution and income, and have increased inequality. They also show that access increases and in most cases together with price increase. With a rigorous econometrical method, Galiani et al. (2005) demonstrate for the case of Argentina that not only privatised firms were more efficient, invested more and provided better service, but the access also increased in privatised areas. In addition, they also show that welfare increases more with PSP since for same levels of connection, child mortality decreased more in PSP compared to that of the public sector and that it was the poor who benefited the most. However, they are now able to explain the causal mechanism of this increase. Mulreany et al (2006) demonstrate that privatization is not a good policy option for improving access and public health. On a more philosophical level, they argue that privatization prefers the “non-poor” and is profit-motivated and therefore it is not an appropriate policy on equity and social justice ground. In addition, through privatization of water services, the government distances itself from providing one of the essential basic needs to its people.

The World Bank itself has also done several studies on the issue of access and affordability regarding PSP in infrastructure services. One such study recognizes that PSP in the infrastructure did not take into account the sensitive social issues and as a result did not have any specific social policy framework (Foster 2004, p. 5). Estache et al. (2001, p. 1180) also highlight that PSP produces distributional effects, which has been neglected. They also show that the relation between the poor and PSP is complex and ambiguous. However, they argue that the social issues of PSP should be tackled within the general framework of the poverty alleviations programmes and not directly within the utility reforms (Estache et al. 2002, p. 107). PSP does not necessarily improve coverage and there is no evidence that the poor suffer as a result of private sector participation in the water supply (Clarke et al. 2004). In another study Estache et al. (2002, p. 13) demonstrate that although the total welfare increases as a result of PSP, the gains are not shared with the poor. Estache & et al. (2005) demonstrate that there appears to be no difference between private and public operation in terms of efficiency performance. Another World Bank publication recognizes that more in-depth analysis are needed to evaluate the impact of private sector participation on the poor (Kessides 2004, p. 15). In a joint publication, IMF and World (2004, p. 3) recognize that PSP is not necessarily superior than the public sector in the provision of water services.

Access and affordability

There is very little empirical work done regarding the effects of PSP in water supply in developing countries. In *cross country* analysis, there are several studies regarding utility privatization and coverage, but there are only a few on PSP in water supply. In general, the results are inconclusive. One such study worth mentioning is that of Clarke et al. (2004). They are not able to show whether private sector was responsible for increasing coverage, since coverage also increased in areas with public sector management. As for the connection rates for the poor, there is no evidence that this increase is associated with the private sector.

Therefore, these improvements do not reflect on the welfare of consumers. In most case studies, it was found that prices increased after the PSP. Raising water prices is counterproductive and increases inequality, taking into account the low level of prices and income elasticities for water. In other words, water consumption varies very little with income since water needs of each person are similar in terms of drinking, hygiene, sanitation, etc. So they will have to pay no matter how high the prices would be. For example, according to Smets (2004, p. 11) water consumption in Europe varies around 75% between the first and last income deciles, whereas income varies around 600%.

There are very few empirical studies done on the *affordability* issues and PSP in water supply in developing countries. It is assumed that the weight (proportion of income) of water bills will be higher for lower income people compared to that of richer ones. For example, in developed countries each household pays between 0.5-2% (1.3 in Germany and Netherlands, 1.2 in France) of their income for water bills (Smets 2004, p. 19). Those who earn the minimum salary in France and Germany pay between 3.4-5.2% of their income. In the UK, the poorest 1% of households pay over 10% of their income in water. In Mexico the poorest pay 5.2% of their income for water, whereas the rich pay only 0.8% (Smets 2004, p. 133). According to international practices, this should not go beyond 5% of a household's income. In some developed countries, a household should not pay more than 3 times the median water bills (3.9 in UK, and 3.6 in France).

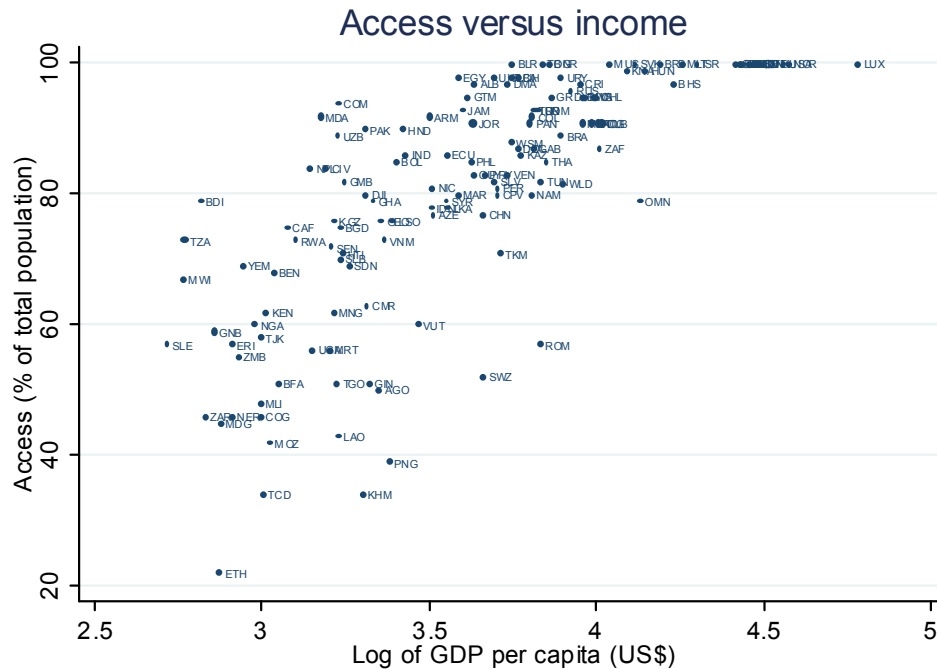
The topic of privatization of public services is been well researched. Generally, there is agreement that privatization leads to an increase in micro-economics performance (profitability of firms, productivity increase and efficiency of firms). However, how this impacts the broader economy and how this helps in reducing poverty is still not researched. There are only a few serious academic research undertaken on the topic of linking privatization with poverty.

Some statistics

It would be instructive to see what is happening in the water supply sector worldwide. For this purpose, some basic statistics can be used. Statistics reveals that utilities supplying water are not able to serve everyone. In other words, there are many people who are not connected to the network. As would be expected, the proportion of people with access to improved water source increases with the level of development, as measured by the GPD per capita (PPP, current international dollars) (*Graph 1*). It is

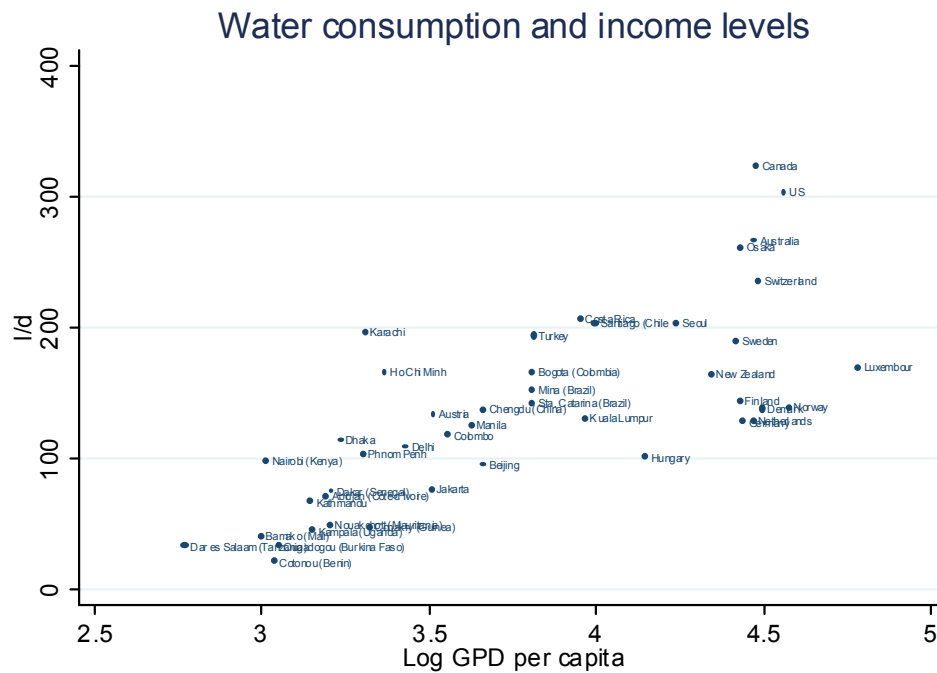
worth noting that this trend is not linear but in a logarithmic form. This implies that extra efforts in terms of resources are needed to reach those who are unreachable and this takes time.

Graph 1



Does water consumption increase by income levels (by country, and by income levels of households). It appears that water consumption increases with income level (*Graph 2*). But there are other elements to take into account when generalizing this fact such as climatic zones, availability of water, etc. As mentioned earlier, water is a basic need and therefore the elasticity varies little with income levels. It should be noted that according to WHO, 50 l/d/p is the minimum amount of water needed to sustain oneself. In the developed countries each person uses 150 l/d, whereas in developing countries it could be as little as 20 l/d. With a consumption of 30-50 liters per capita, the poorest 20% of the population would only consume 6% of a typical city's total water consumption (World Bank 2003a, p. 6).

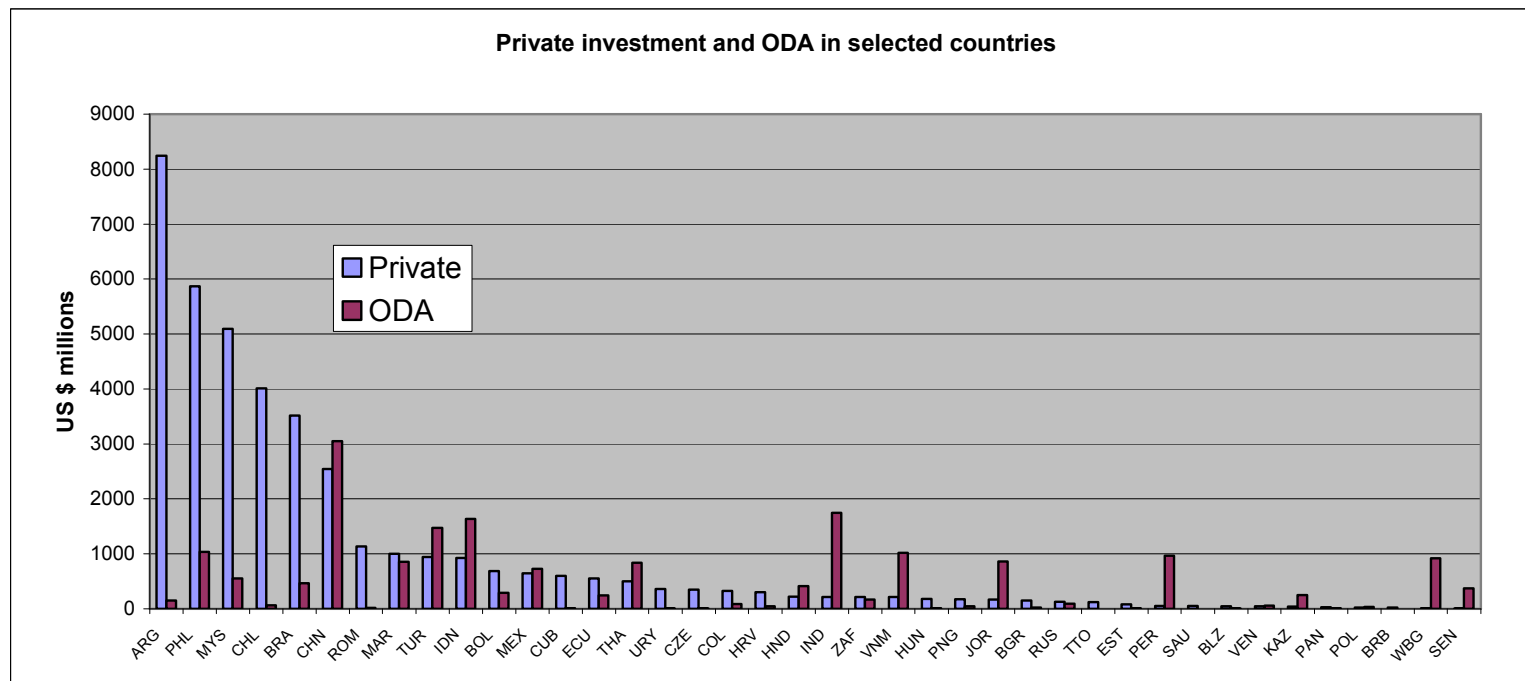
Graph 2



Where does private investment and aid in water supply and sanitation go?

As can be seen from the *graph 3*, Argentina received the highest sum of private investment from 1990–2003, representing over US\$8 billion, followed by Philippines, Malaysia and Chile. These are not the countries with the lowest level of access, nor are these countries the poorest of the poor. It is increasingly recognized that foreign capital is only interested in large markets with very limited risks (World Bank 2005b, p. 170). In other words, the risks associated with infrastructure projects are too large to be absorbed by the private sector (World Bank 2005c, p. 20). Within this context, the privatization wave of the 1990s bypassed most developing countries, especially the sub-Saharan Africa, which only received 3% of the total private infrastructure investment.

As for ODA, the highest amount went to China followed by Egypt, India, Indonesia and Turkey during the same period (*Graph 3*). Once again, aid does not necessarily go where is most needed, especially in Africa.

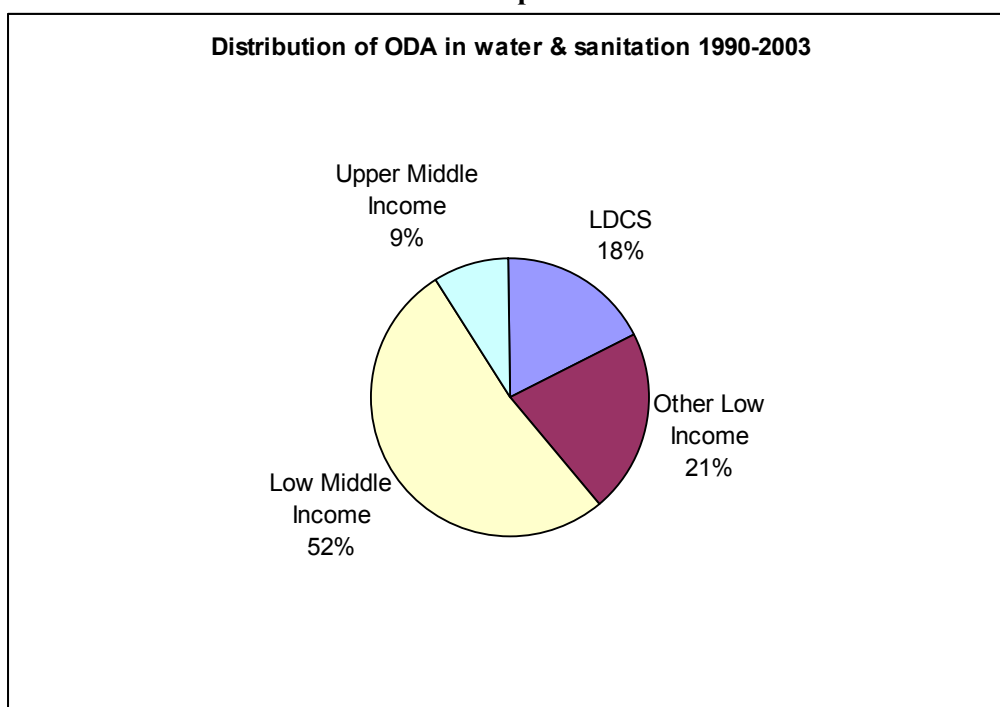


Source: WDI 2005; OECD 2005⁷

⁷ OECD's International Development Statistics Database on aid and other resource flows. www.oecd.org

Another interesting point to note is that it is not the least developed countries that receive the most ODA (*Graph 4*). Lower middle income countries received over half of the total ODA between 1990-2003, representing over US\$16 billion.

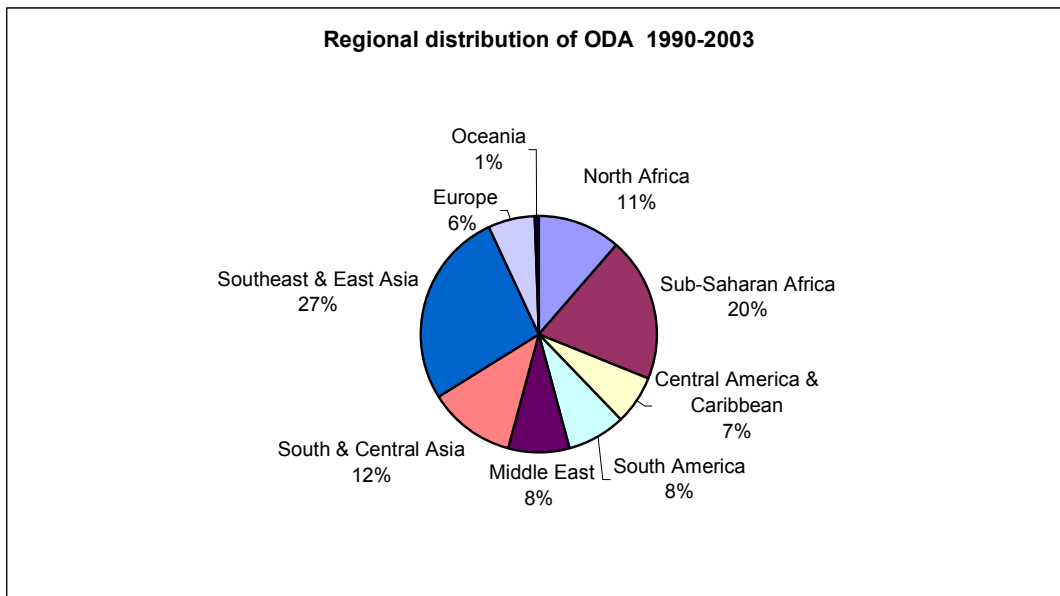
Graph 4



Source: OECD 2005

In terms of regional distribution, Southeast and East Asia received most ODA between 1990-2003, representing US\$ 8.5 billion, followed by Sub-Saharan Africa totaling US\$ 6.2 billion, at around 20% of the total ODA flows (*Graph 5*). Ghana received around 7% of the total aid destined for sub-Saharan Africa, followed by Tanzania, Senegal and Uganda at around 6% each.

Graph 5

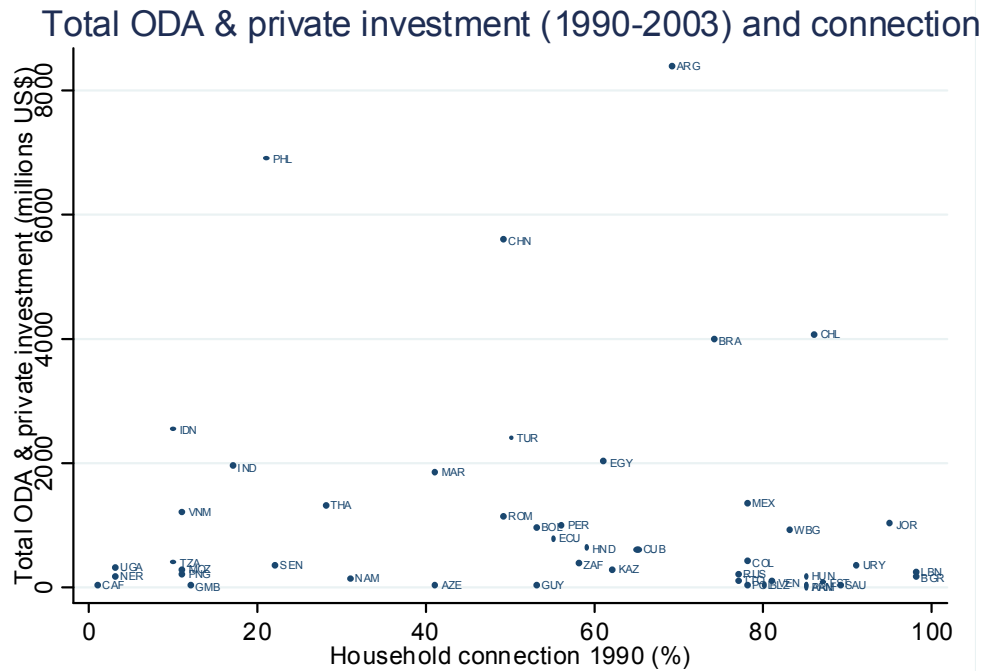


Source: OECD 2005

Does the money go where it's the most needed?

In theory the countries that have low household connection rates should receive more funds to improve access for the poor people. However, by combining both private investment and ODA in water and sanitation, it is observed that funds do not go where its needed the most (except for a few outliers such as Argentina, Philippines and China) (*Graph 6*). The countries which have lower levels of connection received little funds and the countries that have over 70% of connection received more assistance both in terms of ODA and private investment.

Graph 6



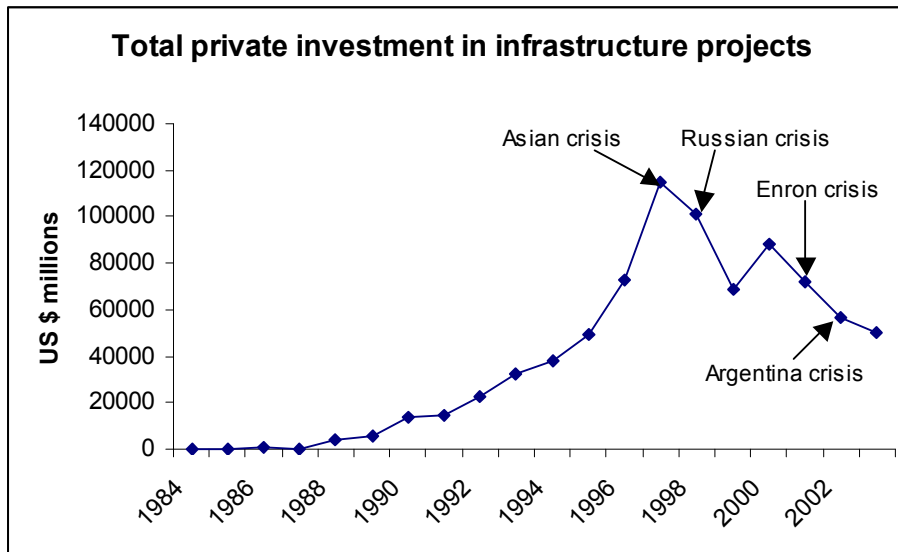
Source: WDI 2005; OECD 2005

After these basic figures, it is necessary to see the historical developments of PSP in water supply.

PSP in water supply

The involvement of private sector in water supply is not a new phenomenon. What is new is the belief that private sector is the sole solution for fixing water problems (Rodriguez 2004, p. 108). As mentioned earlier, empirical studies conducted so far demonstrate that the relationship between ownership and efficiency is unclear at best. It should be reminded that development banks such as the World Bank and its private arm the IFC gave loans to governments to improve their water supplies since the 1960s. It was argued that improvement in the public infrastructure would lead to “*development*”. This trend continued till the 1980s when the focus changed on the *supply side economics*. It was argued that the size of governments should be reduced in order to increase economic growth. Within this context, the private sector was called in for providing the public services, including water services.

Graph 7

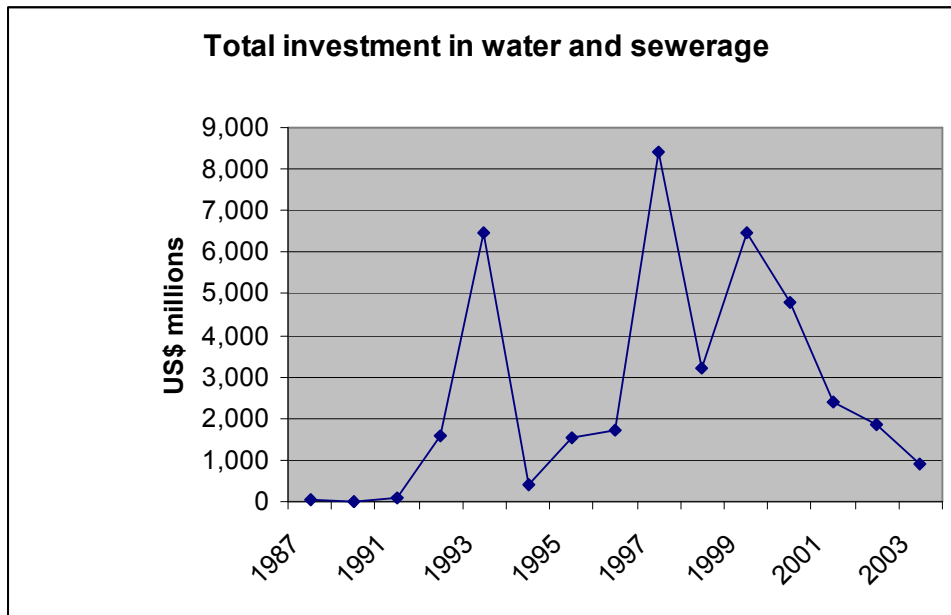


Source: World Bank PPI⁸

As can be seen from the *graph 7*, private sector investment increased dramatically since the early 1990s, reaching its peak in 1997. The Asian financial crisis and the successive crises in other countries and the growing concerns about PSP in infrastructure projects and reservations amongst the investors to go into developing countries due to weak regulatory instruments and market failures led to a waning of private investment in general. Why was there a huge inflow in investment during the 1990s? According to UNCTAD (2000), the mid 1990s has been a period of merges and takeovers, which resulted in increased private flows. It is argued that the so-called “investments” were not really investment (greenfield) but private flows for acquiring new business assets. As for investments in water supply and sanitation, the private investment flows have been very erratic, reaching its peak in 1997 and falling to under one billion US\$ in 2003 (*Graph 8*).

⁸ World Bank’s private project investment database. www.worldbank.org

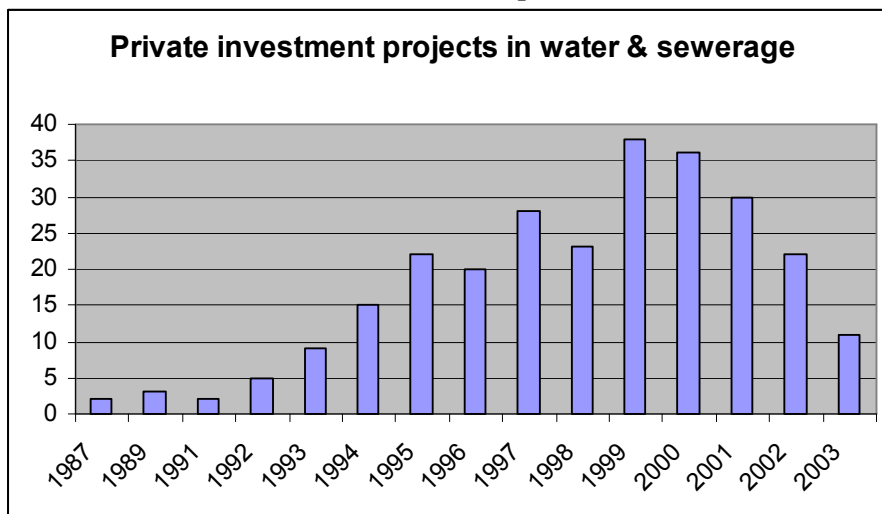
Graph 8



Source: World Bank PPI

During the 1984-2003 period, there were 140 developing countries which had introduced some form or another of private sector participation in infrastructure services (World Bank PPI) (*Graph 9*). According to the World Bank's private project investment database, there were only 2 private investment projects in water and sewerage in 1987, increasing its peak in 1999 with 38 projects and then decreasing to 11 projects in 2003. There are currently 266 projects in developing countries, of which 42% (111) are of the concession type and less than 1% (20) only with full privatization (divestiture). At least 55 countries had some sort of PSP in water and sewerage by the end of 2003.

Graph 9

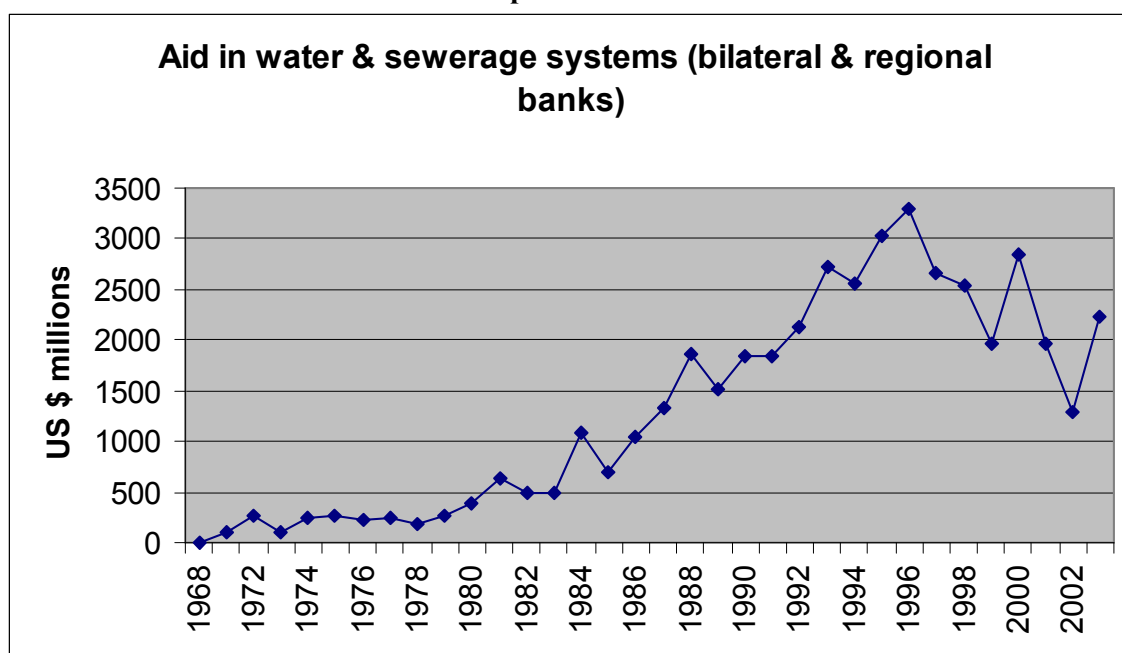


Source: World Bank PPI

According to Estache & Goicoechea (2005), there were 35% of the developing countries that had PSP and 80% for developed countries (it should be noted that the sample for developed countries is covers only 38% of countries, and 82% for developing countries). The poorest regions of the world have difficulty in attracting private sector investment, due mainly to the high levels of commercial risks. This is manifested by the fact that only 13% of the countries in South Asia have PSP, 20% for sub-Saharan Africa, 21% for middle east & north Africa. East Asia & Pacific has 64%, followed closely by Eastern Europe & Central Asia with 62% and 41% for Latin America and Caribbean. In other words, poorer countries have higher risks which leads to having higher cost of capital, which implies higher tariff for the poor (Estache & Pinglo 2004). If we look into the private sector modality, we find that East Asia & Pacific generally has many BOTS and a few very large concessions.

In addition to private investment, aid could also help developing countries solve their water problems. Aid in the water and sewerage systems by bilateral donors and regional banks also followed a similar pattern, culminating in 1997 and falling since then (*Graph 10*). Why did aid follow similar pattern as private investment. It is argued that aid money was used in the privatization process, in other words, it was used to make the sale of State-owned enterprises more attractive to buyers.

Graph 10



Source: OECD 2005

Reforms of the water sector and PSP has taken different forms such as complete privatization as in the case of England & Wales, BOT models, private management contracts, concessions (*Table 1*).

Table 1 Different forms of private sector participation in water supply

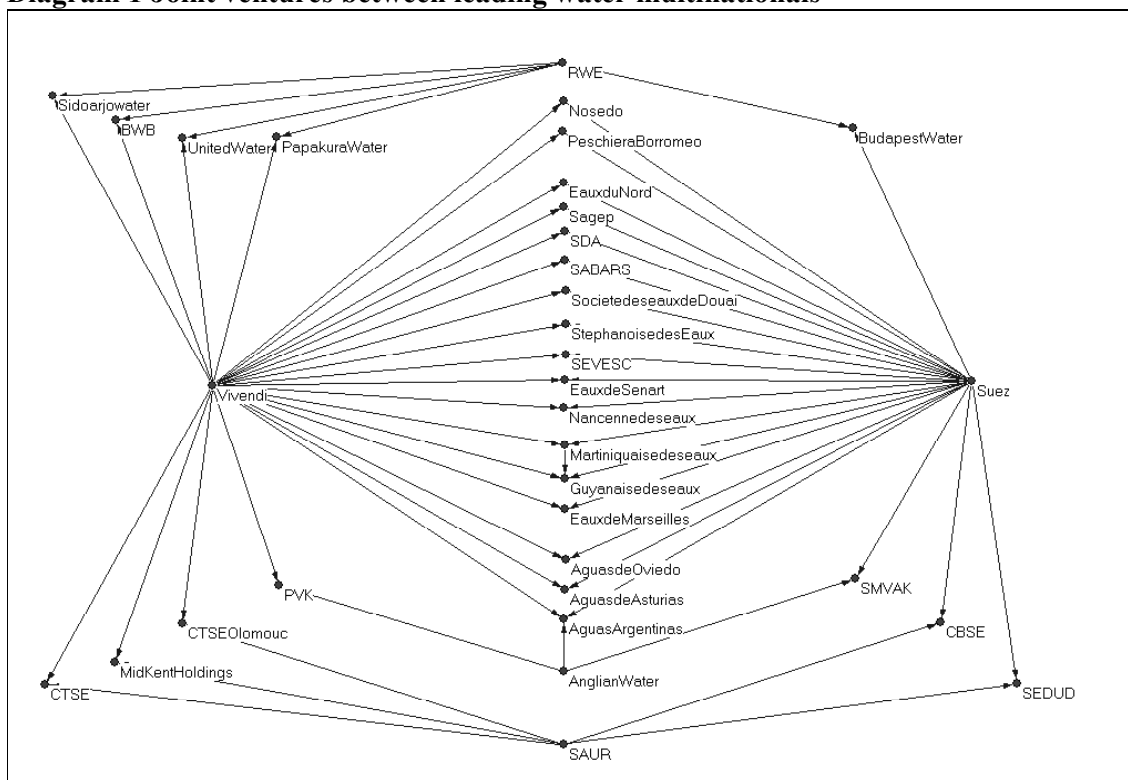
Option	Ownership	Financing	Operations
Service contract (Mexico City, Santiago-Chile, Madras)	Public	Public	Public then some private
Management contract (Cartagena-Colombia, Gdansk-Poland, Johannesburg, Mali)	Public	Public	Private
Lease contract or <i>affermage</i> (Cote d'Ivoire, Guinea, Czech Republic)	Public	Public	Private
Concession (Buenos Aires-Argentina, Manila, Cancun-Mexico, Jakarta)	Public	Private	Private
BOT or BOOT contract (build-operate-transfer) or (build-own-operate-transfer) Mendoza-Argentina, Izmit-Turkey, Natal-South Africa)	Private then public	Private	Private
Reverse BOOT	Public then private	Public	Private
Joint ownership	Private and public	Private and public	Private and public
Sale or full divestiture (England and Wales)	Private	Private	Private

Expanded from Kessides 2004

In these changes, i.e. shifting of responsibilities from State to market, the institutional framework also alters.

The water sector is dominated by a few international companies such as Suez, Vivendi and SUAR from France, RWE-Thames (Germany, UK). It should be noted that it is estimated that between 3-5% of the world population is supplied through piped water by the private sector (OECD 2003, p. 13; Rodriguez 2004, p. 108). These few multinationals manage to restrict competition, both at international level and also at local levels. For example, in France Suez and Vivendi control 85% of market. Joint ventures are a common practice by these giant water companies to prevent competition (*See diagram 1*).

Diagram 1 Joint ventures between leading water multinationals



Source: Lobina and Hall 2003

The two French companies, Suez and Vivendi are present in over 100 countries. Vivendi is claiming that it has operations in some 80 countries and is supplying drinking water to 110 million customers worldwide⁹. Suez claims it supplies drinking water to 91 million people and some 49 million with sanitation services (Table 2)¹⁰.

Table 2 Presence of Suez worldwide

	Water supply (million)	Sanitation services (million)
North America	9.9	5.3
South America	21.6	15.9
Europe	33	20.3
Africa and Middle East	9.4	7.2
Asia Pacific	17	6.4

Source: www.suez.com

It was estimated that in 1990, around 51 million people were supplied with private companies and this figure raised to around 300 million in 2002 (Gleick et al. 2004, p. 46). In 1990 the six companies who were most active were present in 12 countries and this figure increased to over 56 countries by 2002 (CPI 2003).

After this brief analysis of the PSP in water supply, it would be timely to see what impact did they have in developing countries and what are the results.

⁹ See Veolia website at www.veoliawater.com

¹⁰ See Suez website at www.suez.com

Results so far: has privatization gone full circle?

The results are quite mixed of privatization and PSP in developing economies. In terms of increasing access, it estimated that PSP has increased a mere 600,000 connections in 15 years (World Development Movement 2006). If the public finance is excluded, the private sector is responsible for providing just for an additional 250,000 connections in the same period.

Those who were putting pressure on the governments to privatize now recognize that privatization of infrastructure failed to bring the expected gains and growth to the economy (World Bank 2005c, p. 19). Very few of them had success, while the majority did not achieve what was intended of the PSP. The experiences of water companies in developing and developed countries demonstrate that PSP in the water sector has a very unreliable record. There has been bribery, corruption (Davis 2004), non compliance of contractual agreements, layoffs, tariff increase, and environmental pollutions. “Sign and renegotiate” is *l'ordre du jour* and the World Bank has even published a manual on how to renegotiate a failed concession contract (Guash 2004).

Nowadays, it seems as if privatization has gone full circle. Some have argued that there will be a need to “remunicipalize” the water services (Bakker 2003; Robbins 2003). Hall (2004) argues that privatization of water services has failed in many parts of the world and are falling apart. There is an emerging trend of failures in PSP. The list of failures is long and growing, which includes includes Buenos Aires (Argentina), Atlanta (Georgia, USA), Manila (Philippines), Cochabamba (Bolivia), Jakarta (Indonesia), Nelspruit (South Africa), Kelantan (Malaysia), Mozambique, Nkoekobde (South Africa), Conakry (Guinea), Gambia, Parana (Brazil), Trinidad & Tobago Belize, La Paz (Bolivia), and Dar es Salam (Tanzania).

According the World Bank’s PPI¹¹, there were 10 projects in water supply that were cancelled worldwide between 1991-2001 by the World Bank¹². They are another 5 which are “distressed”¹³. Several reasons were advanced to explain why these projects were cancelled. In most cases, these projects were confronted with controversies relating to high price increases, and problems relating to non-payment from consumers (Harris et al. 2003).

The major water companies (like Suez, Veolia, and Thames Water) are withdrawing from developing countries as result of the economic and financial crises (Asian crisis, peso crisis in Argentina, natural disasters like El Nino, draughts and floods). Most of the privatization was done during a stable period and it was assumed that there would be macroeconomic stability and sustainability. In some cases the implicit assumption of such stability and sustainability proved to be unrealistic (Argentina, Philippines, Brazil). During macroeconomic instability, it is very difficult to calculate a price that is appropriate for the private operator and at the same time affordable to the disadvantaged consumers and is pertinent to the economy (Chisari and Ferro 2005).

¹¹ World Bank’s private project investment database. www.worldbank.org

¹²Central African Republic, Malaysia (2 projects), Argentina (2 projects), China (2 projects), Brazil, Bolivia, Vietnam

¹³Projects where the government or the operator has either requested contract termination or are in international arbitration. These include 4 projects in Argentina and one in the Philippines.

Why are there so many projects being cancelled? Some have argued that theoretical foundation of PSP in water supply is flawed. Other reasons have been advanced, but one of them which merits particular attention is the lack of understanding of the local context in which reform is taking place.

The politics of reform in the water sector

Although most of the economic studies tend to be favorable to privatization (Megginson and Netter 2001), why then are these results not consistent with the street protests and failures? The answer lies in the political economy and the social structure. It is argued that policies should be based on the existing equilibrium of social, cultural and political structure of each country. There could be better “social governance” in order to improve social welfare in tandem with the existing formal or informal social institutions (Barraqué 2003).

Some social scientists have repeated that the social, economic and political dimensions are inter-linked together. For any policy to be successful, all the dimensions should be taken into account for a given society. The economic and political areas are a product of the social governance. Therefore if the intended policy is not contextualized within social governance, it is doomed to be rejected. This is precisely what happens in the case of privatization. IADB emphasizes on the need to take a closer look at critical processes that shape policies, carry them forward from idea to implementation and sustain them overtime (IADB 2005, p. 3). If no, policy changes such as privatization will lead to failure.

There are many examples to illustrate why privatization has failed in certain countries. Nickson and Vargas (2002) show how vested interests combined with politics, lack of proper communication and street protests managed to cancel the Cochabamba concession projects in Bolivia. Kohl (2004) also demonstrates how the poor understanding of the social and political realities led to the failure of Bolivian privatization project.

There has been an increasing feeling of discontent and active resistance against privatization in developing countries and developed countries alike. It is argued that the economic benefits of privatization has not been achieved and that the social impact of privatization were not thoroughly analyzed, especially the impact on the poor.

Another reason of private sector failure in water supply that is frequently advanced is the lack of regulatory mechanism in place.

Has regulation helped?

Whenever privatization failed in terms of achieving its contractual goals, it was argued by the pro-privatization camp that it was mainly due to weak regulatory mechanism in place. In other words, regulation became the scapegoat, and the concept of PSP still prevailed.

It is widely recognized that *regulation and regulatory governance* are one of the key elements of development policy thinking in promoting pro-poor market-led development (Kirkpatrick and Parker 2004). However, very little attention has been focused on this topic in developing countries. The donor agencies put more emphasis on privatization, liberalization and deregulation of economy, without prior strengthening the regulatory governance. In developing countries, the introduction of competition and effective regulation has been neglected. The sequencing of privatization, regulation and competition is important. Zhang et al. (2005) demonstrate using a panel data econometrical model that establishing a regulatory authority and introducing competition prior to privatization results in better performance for the operator as well as for the consumers.

It is worth mentioning that the economics of regulation or regulatory economics has been an offshoot of the neo-liberal economic strategies (Minogue 2002, p. 652). The regulatory economics is deeply embedded within the broader debate of the role of State.

During the past 5 decades, the role of State has dramatically changed regarding growth and development. In the period going from 1960s to 1980s, it was *à la mode* for the State to be involved in promoting industrialization through *import substitution*. The State played an active role both as actor and also as a regulator to promote industrial and agricultural development. However, as a result of “government failures”¹⁴ in some countries during the late 1980s and due to some relative successes in privatization and liberalization in developed economies, international development agencies tried promoting privatization, liberalization and deregulation in developing economies. As a result, privatization had also become one of the key conditionality elements of donor agencies and international development institutions like World Bank, IMF and even in Poverty Reduction Strategy Papers (PRSPs), Heavily Indebted Poor Countries (HIPC) for the disbursement of aid funding (Bayliss 2002). For example, World Development Movement (2005) shows that 15 out of 24 HIPC countries (63%) were pressured to put privatization/greater involvement of private sector in their water sector in the country PRSPs. This figure is 12 out of 18 (67%) of non-HIPC countries.

The World Bank Group has enormous leverage in the water sector ranging from technical assistance, adjustment loans/credits, and investments loans, local currency financing, IBRD and IDA guarantees, IFC investments and guarantees and MIGA guarantees (World Bank 2004b, p. 13). Empirical studies do support this view that aid plays a strong role in deregulating and liberalizing an economy (Kilby 2005). This shift from an interventionist role towards a more regulatory role of the State assumes

¹⁴ According to Yarrow (1999, p. 158), government failure impedes the efficient functioning of markets.

that the private sector should be left alone in providing goods and services and in some cases (such as utilities infrastructure) government regulation is necessary (Majone 1997).

There are relatively few studies done on the nature, role and performance of these new forms of regulatory state. This is particularly true for developing countries which have very different social, cultural, and economic settings. Consequently, it should be reminded that models of regulation from developed countries or “best practices” approach cannot be easily replicated or transferred to developing economies. Since regulation is deeply embedded in the local cultural and institutional setting (Minogue 2005). In this case there is a “reality gap” between the advocates of neo-liberal ideas and the actual legal, administrative, political, and economic processes in developing countries.

There seems to be a general consensus amongst development practitioners that there is a need for better regulation. However, effective and efficient institutions take time to develop, even in developed economies. It is argued that developing countries have indeed established regulatory institutions on paper, but in reality they are ineffective (Kessides 2005, p. 86). So there seems to be a gap in developing good performing institutions that would protect the consumers, operators and the government. It seems that too much attention has been drawn into the end result, rather than on the basic foundations of the process.

Since the private sector has been involved in the water business the 19th century in developed economies, can history offer some lessons for policy makers?

Can history be our lesson?

From a historical perspective, the current global water situation is a result of social, economic and ideological developments (Juuti and Katko 2005). Private sector participation PSP in urban water supply has a long history, which was instrumental in establishing modern water supply systems. This started as a result of urban growth since the mid-1800s in most European countries and North America. England was the precursor of modern water supply systems, which later spread to Germany, elsewhere in Europe and to the United States. However during the late 1800s, as a result of their unsatisfactory nature (inefficient, costly and corrupt), these services were returned to public or municipal ownership. One exception was France, where private operators such as Compagnie Générale des Eaux (later Vivendi and Veolia now) and Lyonnaise des Eaux (Suez now) which were established in 1852 have survived till now. This is peculiar to France with its over 36,000 municipalities and as a result of continued presence of these companies through concessions.

Within the European countries the provision of urban water supply is significantly different ranging from no PSP (the Netherlands) to an amalgam of PPP (France, Belgium, Finland, Spain, Germany, Greece, Italy) and PPP but with no profit motive (Austria, Denmark and Sweden) to full privatization (England & Wales) (Mohajeri et al. 2003).

Juuti and Katko (2005, p. 108) warn that water should not be only treated as economic good but should be seen from the political, economic, socio-cultural, technological,

environmental, and legislative dimensions. The World Bank (2004, p. 166-167) mentions that since developed countries used private sector to develop their water supply, developing countries should likewise encourage the private sector participation in this sector. History however warns against liberalizing the water sector to attract private operators and that there is no one-size-fits-all solution.

Even in the case of developed countries like France and the England & Wales where the private sector has been dominant in supplying water, there are numerous problems. For the case of England & Wales, the prices charged to customers are relatively high compared to those charged by the public companies (Dore et al. 2004). Similar results regarding lack of efficiency gains of the private sector in the England & Wales are demonstrated by Saal and Parker (2001). In addition, the rate of return and profits of the private companies have been extremely high. Bakker (2005) sums the England & Wales as “successful privatization, broad-based commercialization, and failed commodification” (p. 559). Barraqué (2003, p. 210) argues that the French system of water management by the municipality was intended to get the rich pay for the poor. But the problem with this method was that it limits other players to *compete for the market*. This is also the case for Barcelona and Venice. Tariffs have also been substantially higher (around 40%) compared to publicly managed companies and there is lack of regulation by the municipalities, which leads to corruption and lack of competition. It is argued that the private sector did not have efficiency advantage in both cases and that privatization did not lead to welfare gains.

Repacking privatization and PSP through PPP?

Like the first World Panel on Financing Water Infrastructure (chaired by Michel Camdessus), the Report on Financing Water for All (chaired by Angel Gurría) promotes PSP and speculates that private sector can bring the necessary investments. The 2003 G8 Water Action Plan¹⁵ especially called for PSP in developing countries and requested the World Bank to implement the recommendations of the World Panel on Financing Water Infrastructure.

In the World Development Report 2004 (Making services work for the poor), the World Bank proposed a “eight sizes fit all” approach for delivering services and encouraged the private sector to deliver social services such as water. It was considered that the Bank had taken a very “simplistic approach” based on the principal agent problem (Mehrotra & Delamonica 2005, p. 167). The governments’ role is to provide a regulatory framework for the private sector to operate and to provide subsidies. In its earlier publication *Bureaucrats in Business* (1995), the Bank forcefully argued that governments should sell off their State Owned Enterprises, including water services.

The high levels of privatization failures especially in the water sector has led pro-privatization group to do some soul-searching. It is now accepted that it does not matter who controls the network, but that it should be run like a business with equity principles. This was clearly mentioned in the World Bank’s Water Resources Sector Strategy (2004a), that a more “pragmatic but principled” approach for water would be

¹⁵ Evian Summit 2003, available at <http://www.g8.fr/evian/english/home.html> (accessed 28 April 2006).

adopted and more emphasis would be given to broader reform (such as economic liberalization) outside of the water sector (p. 3). In addition, the World Bank has recently recognized that privatization may not make sense in certain local context (World Bank 2005b, World Bank 2005c). There is a growing consensus among experts and especially the World Bank that regardless of who provides the services, whether it's the public, private or community-based, the World Bank's policy would be to ensure the financial viability of the service provider (World Bank 2004b p. 1). In some cases, privatization may lead towards transferring public assets into private hands at discounted price and therefore risk of being captured (World Bank 2005b). It may lead to increased tariff which may outweigh the gains in coverage or quality (p. 14).

It is less important as to who provides these services in terms of equity. The important thing is whether the services provider has incentives and how accountable are they to the general public. However, being loyal to its ideals the World Bank nonetheless recommends that provided good regulatory mechanism, PSP would be useful in cases where the public service is inefficient and highly corrupt. The United Nations Second World Water Report also highlights that despite being inappropriate in all cases, private sector plays a significant role in delivering cost-efficient water services (UNESCO 2006, p. 400). It further mentions that role of regulation in regards to societal goals such as social equity.

The United Nations has generally recognized that much more emphasis should be given to availability, accessibility, and affordability of public services, especially in relation to the poor (UNDP 2005, p. 7). Regarding public services, the United Nations (2005) emphasis that even in the best circumstances, private sector participation cannot replace the public provision (p. 24). It mentions the role of regulatory mechanism which could help in preventing discrimination of certain groups. Others agree that there should be some clear policy priority for "equitable, efficient and reliable operation and management" (Gleick et al. 2004, p. 47). The Pacific Institute has gone a step further by proposing several guiding principles in dealing with water privatization, which includes managing water as a social good, using sound economics in water management, having strong regulation, etc. This is also highlighted by Gleick et al. (2004, p. 48) who argue that the effects of PSP will be greatest where there is weak and corrupt government. Indeed, how can PSP succeed with weak and corrupt governments? It is to be noted that regulation may deem inefficient precisely in those countries where the bureaucracy is corrupt. ADBa (2006, p. 43-44) also highlighted that the most important role in the water sector would be that of small local private sector as opposed to the larger multinational corporations.

The private sector seems to be on the defensive and the pro-privatization rhetoric is changing¹⁶. This was observed during the recently held World Water Forum 4 in Mexico City, which was sponsored by the World Water Council – a pro-privatization lobby group. From the recent privatization failures, it is gradually recognized that private sector cannot deliver to the poor. It would however be premature to speculate that PSP debate is dead. The privatization debate is very much alive and it is now

¹⁶ According to Hall & Hoedmann (2006), Aquafed was created by the international federation of private operators as a advocacy tool to promote private sector participation in the water sector.

turned around public-private partnerships (PPP) and community or locally based solutions.

Although the World Bank pretends that conditionality for privatization and user fees has decreased (World Bank 2005d, p. 9), there is a refocus on repackaging privatization through different means such as PPP. ADB's position is rather ambiguous as it mentions that it *"does not support water privatization, but advocates for improved delivery of water services, which may require the participation of the private sector"*¹⁷. Since privatization is seen as an ideological concept, development agencies are now branding privatization through PPP initiatives. They argue that PPP offers the same benefits as privatization (IMF 2004, p.4). In its progress report on infrastructure, the Development Committee of the World Bank and IMF recommended encouraging private sector participation in infrastructure projects through "direct measures" (management contracts, leases, concessions) and through providing technical assistance (World Bank 2005e, p.23). In other words, the World Bank will continue providing soft loans to the private sector in order to help public utilities to increase their efficiency in service delivery. Since direct investment by the private sector has decreased, the World Bank will encourage private management of public utilities. In addition, the World Bank will continue in providing assistance in preparing for infrastructure project preparation.

Taking this concept further, the World Bank (2006) published a Toolkit on how to involve private sector in water services. It is argued that by involving the private sector in the provision of water services, governments will widen their reform options (p. xix). More precisely, the private sector can create a focus on service and commercial performance, make it easier to access finance, and boost clarity and sustainability. However the Toolkit also cautions that there is no free money, no unlimited risk-bearing, and that government regulation should continue. But it does not provide any answers as how to reconcile the profit motives to the private sector and the public interest.

However, the Word Bank staff have a wide range of opinions on privatization. This is often reflected in some of its staff publications where the debate on privatization is much more nuanced. However, the World Bank as an institution is not willing to abandon its ideology of market approaches and this is often reflected in country policy operational documents.

In its Review its Water Policy Implementation, ADB (2006b), it recognizes that PPP has been one of the most difficult and controversial objectives. This is evidenced by the fact that from its technical assistance grants and loans in 2000s, only two projects were successful in integrating PPP. However, it will encourage efficiency gains through PPP (rather than only trying to secure private capital). It recognizes that there is an urgent need for better advocacy and outreach in order to promote PPP in the water services. Mehrotra & Delamonica (2005, p. 166) also speculate that behind the scenes, there is relentless pressure from international agencies and donor countries to promote PPP in basic services, including water services. This is demonstrated by the recent developments in the international bodies that PPP will likely be promoted in

¹⁷ <http://www.adb.org/water/actions/REG/public-private-models.asp> (accessed 28 April 2006)

basic services, including water¹⁸. In other words, the Washington Consensus seems to be given a new life and rejuvenated through the PPP.

¹⁸ World Bank/IMF's initiative on Heavily Indebted Poor Countries (HIPC), Poverty Reduction Strategy Papers (PRSPs), World Bank's Private Sector Development Strategy, WTO and GATS, among others.

Conclusion

It was argued that the PSP in the water supply would amongst other things, help the poor have access to the service with affordable price. However, experiences of PSP in water supply worldwide demonstrate that there is conflict between social development, public health, environmental concerns and poverty reduction on the one hand and the motive of profit maximizing of the private sector on the other. The profit seeking motive of the private sector seems difficult to reconcile with providing service to the poor. In other words there is a diverging interest between the public sector, private sector and consumers, which seems hard to reconcile. Although the financial sustainability is considered vital, financial profitability should not be the main goal of the water services.

The PSP in water supply which is mainly based on commercial and profit motives may not achieve the benefits it was supposed to bring to the poor. Recent developments shows that larger multinational companies are not interested in the low income countries since there is lack of commercial viability of water supply in developing countries (Global Water Intelligence 2005). In other words, from the private sector's perspective, low income countries and the poor in particular are unattractive and have high levels risks. In order to circumvent this risk, the private sector chooses or "cherry picks" better off customers in an urban area or less risky environment.

To overcome some of these insufficiencies, the private sector prefers to rely on subsidies, soft loans, and a renegotiation of the contractual agreement in order to provide service to the poor. In other words, the private sector is using the same sources of funds as the public sector, such as loans from bilateral and multilateral donors, aid money, and money from customers through tariffs. In general, and as evidence suggests, it is public funds that supports the private sector in providing services to the poor. The World Bank also clearly states even where there is public-private partnerships, public funding will be essential to meet the required investments (World Bank, 2004b p. 8 & 15)¹⁹.

As demonstrated in this article, the policy of PSP in water supply is economically flawed and politically difficult, as evidenced by the increasing failures of PSP projects. The private sector is withdrawing from low-income countries which are regarded as risky and is reluctant to supply water to poor neighbourhoods. Despite evidence pointing to decreased PSP in water services, its main proponents are trying to repackage the concept through PPP. This article argues that the free-market ideology of PSP, PPP or its varieties is being pushed as a priority rather than relying on common sense and looking at the evidence.

¹⁹ World Bank. 2004b. Public and private sector roles in water supply and sanitation services, Operation guidance for World Bank Group Staff, World Bank.

References

- Asian Development Bank (2006a) *Asia Water Watch 2015*. Manila: ADB.
- Asian Development Bank (2006b) 'Water for All: The Review Panel's Final Report and Recommendations'. www.adb.org, accessed 28 April 2006. Manila: ADB
- Asian Development Bank (2004) Water in Asian Cities: Utilities' performance and civil society views. ADB.
- Bakker, K. (2003) 'From Public to Private to... Mutual? Restructuring Water Supply Governance in England and Wales', *Geoforum* 34 (3): 359-74.
- Balance, T. and Taylor, A. (2005) *Competition and Economic Regulation in Water: The Future of the European Water Industry*. London: IWA Publishing.
- Barraqué, B. (2003) 'Past and Future Sustainability of Water Policies in Europe', *Natural Resources Forum* 27 (3): 200-11.
- Bayliss, K. (2002) 'Privatisation and Poverty: The Distributional Impact of Utility Privatisation', *Annals of Public and Co-operative Economics* 73 (4): 603-25.
- Benitez, D., Chisari, O. and Estache, A. (2003) 'Can the Gains from Argentina's Utilities Reform Offset Credit Shocks?' in Ugaz C. Waddams Price (ed.), *Utility Privatization and Regulation: A Fair Deal for Consumers?* Northampton, MA: Edward Elgar.
- Birdsall, N. and Nellis, J. (2002) 'Winners and Losers: Assessing the Distributional Impact of Privatization', *World Development* 31 (10): 1617-33.
- Center for Public Integrity (2003) 'The Water Barons'. www.icij.org, Washington, DC: CPI.
- Chisari, O. and Ferro, G. (2005) 'Macroeconomic Shocks and Regulatory Dilemmas: The Affordability and Sustainability Constraints and the Argentine Default Experience', *Quarterly Review of Economics and Finance* 45 (2-3): 403-20.
- Clarke, G., Kosec, K. and Wallsten, S. (2004) *Has Privatization in Water and Sewerage Improved Coverage? Empirical Evidence from Latin America*. World Bank Policy Research Working Paper No. 3445. Washington, DC: World Bank.
- Collignon, B., and Vezina, M. (2000) Independent water and sanitation providers in African cities, Water and Sanitation Program. World Bank.
- Davis, J. (2004) 'Corruption in Public Service Delivery: Experience from South Asia's Water and Sanitation Sector', *World Development* 32 (1): 53-71.
- Dore, M., Kushner, J. and Zumer, K. (2004) 'Privatization of Water in the UK and France: What can we Learn?', *Utilities Policy* 12: 41-50.
- Estache, A. and Goicoechea, A. (2005) *How Widespread were Private Investment and Regulatory Reform in Infrastructure Utilities During the 1990s?* World Bank Policy Research Working Paper No. 3595. Washington, DC: World Bank.
- Estache, A., Perelman, S. and Trujillo, L. (2005) *Infrastructure Performance and Reform in Developing and Transition Economies: Evidence from Survey of Productivity Measures*. World Bank Policy Research Working Paper No. 3514. Washington, DC: World Bank.
- Estache, A. and Pinglo, M. E. (2004) *Are Returns to Private Infrastructure in Developing Countries Consistent with Risks since the Asian Crisis?* World Bank Policy Research Working Paper No. 3373. Washington, DC: World Bank.
- Estache, A. and Rossi, M. (2002) 'How Different is the Efficiency of Public and Private Water Companies in Asia?', *World Bank Economic Review* 16 (1): 139-48.
- Estache, A., Foster, V. and Wodon, Q. (2002) *Accounting for Poverty in Infrastructure Reform: Learning from Latin America's Experience*. World Bank Development Studies. Washington, DC: World Bank.
- Estache, A., Gomez-Lobo, A. and Leipziger, D. (2001) 'Utility Privatization and the Poor: Lessons and Evidence from Latin America', *World Development* 29 (7): 1179-98.
- Foster, V. (2004) *Toward a Social Policy for Argentina's Infrastructure Sectors: Evaluating the Past and Exploring the Future*. World Bank Policy Research Working Paper No. 3422. Washington, DC: World Bank.
- Galiani, S., Gertler, P. and Schargrodsky, E. (2005) 'Water for Life: The Impact of the Privatization of Water Services on Child Mortality', *Journal of Political Economy* 113 (1): 83-120.
- Gleick, P. et al. (2004) *The World's Water 2004-5: The Biennial Report on Freshwater Resources*. Washington, DC and London: Island Press.

- Global Water Intelligence (2005) 'Patience Wins the Day at Veolia', *Global Water Intelligence* 6 (4), May. www.globalwaterintel.com, accessed on 25 August 2005.
- Guasch, L. (2004) *Granting and Renegotiating Infrastructure Concessions*. Washington, DC: World Bank Institute.
- Hall, D. (2004) *Reclaiming Public Water: Achievements, Struggles and Visions from Around the World*. Amsterdam: Transnational Institute.
- Hall, D. and Hoedmann, O. (2006) 'AquaFed: Another Pressure Group for Private Water'. London: PSIRU, University of Greenwich, www.psiru.org
- Harris, C.; Hodges, J.; Schur, M. and Shukla, P. (2003) *Infrastructure Projects: A Review of Cancelled Private Projects*. Public Policy for the Private Sector 252. Washington, DC: World Bank.
- International Monetary Fund (2004) 'Public-Private Partnerships'. A paper prepared by Fiscal Affairs Department in consultation with World Bank and IADB, www.imf.org
- Inter-American Development Bank (2005) *The Politics of Policies 2006 Report*. Washington, DC: IADB.
- Juuti, P. and Katko, T. (2005) 'D45: City in Time', *Water Time*. London: PSIRU, University of Greenwich, www.watertime.net/docs/WP3/D45_City_in_Time.doc, accessed on 25 august 2005.
- Kessides, I. (2005) 'Infrastructure Privatization and Regulation: Promises and Perils', *World Bank Research Observer* 20 (1): 81-108.
- Kessides, I. (2004) *Reforming Infrastructure: Privatization, Regulation and Competition*. New York: Oxford University Press for the World Bank.
- Kilby, C. (2005) 'Aid and Regulation', *Quarterly Review of Economics and Finance* 45 (2-3): 325-45.
- Kirkpatrick, C. and Parker, D. (2004) 'Regulatory Impact Assessment and Regulatory Governance in Developing Countries', *Public Administration and Development* 24 (4): 333-44.
- Kohl, B. (2004) 'Privatization Bolivian Style: A Cautionary Tale', *International Journal of Urban and Regional Research* 28 (4): 893-908.
- Mahajeri, S; Knothe, B.; Lamonthe, D. N.; and Faby, J. A. (2003) *Aqalibrium: European Water Management Between Regulation and Competition*. Brussels: European Commission.
- Majone, G. (1997) 'From the Positive to the Regulatory State', *Journal of Public Policy* 17 (2): 139-67.
- McKenzie, D. and Mookherjee, D. (2003) 'The Distributive Impact of Privatization in Latin America: Evidence from Four Countries', *Economia* 3: 161-233.
- Meggison, W. and Netter, J. (2001) 'From State to Market: A Survey of Empirical Studies on Privatization', *Journal of Economic Literature* 39 (2): 321-89.
- Mehrotra, S. and Delamonica, E. (2005) 'The Private Sector and Privatisation in Social Services', *Global Social Policy* 5 (2): 141-74.
- Minogue, M. (2005) 'Apples and Oranges: Problems in the Analysis of Comparative Regulatory Governance', *Quarterly Review of Economics and Finance* 45 (2-3): 195-214.
- Minogue, M. (2002) 'Governance-Based Analysis of Regulation', *Annals of Public and Co-operative Economics* 73 (4): 649-66.
- Mulreany, J.; Calikoglu, S.; Ruiz S. and Sapsin, J. (2006) 'Water Privatization and Public Health in Latin America', *Revista Panamericana de Salud Pública/Pan American Journal of Public Health* 19 (1): 23-32.
- Nickson, A. and Vargas, C. (2002) 'The Limitations of Water Regulation: The Failure of the Cochabamba Concession in Bolivia', *Bulletin of Latin American Research* 21 (1): 99-120.
- OECD (2005) International Development Statistics Database, www.sourceoecd.org
- Parker, D. and Kirkpatrick, C. (2005) 'Privatization in Developing Countries: A Review of the Evidence and the Policy Lessons', *Journal of Development Studies* 41 (4): 513-41.
- OECD (2003a) *Water: Performance and Challenges in OECD Countries*. Environmental Performance Reviews. Paris: OECD.
- OECD (2003b) *Social Issues in the Provision and Pricing of Water Services*. Paris: OECD.
- OECD (1999) *The Price of Water: Trends in OECD countries*. OECD.
- Robbins, P. (2003) 'Transnational Corporations and the Discourse of Water Privatization', *Journal of International Development* 15 (8): 1073-82.
- Robison, R. and Hewison, K. (2005) 'Introduction: East Asia and the Trials of Neo-Liberalism', *Journal of Development Studies* 41 (2): 183-96.
- Rodriguez, R. (2004) 'The Debate on Privatization of Water Utilities: A Commentary', *Water Resources Development* 20 (1): 107-12.
- Saal, D. and Parker, D. (2001) 'Productivity and Price Performance in the Privatized Water and Sewerage Companies of England and Wales', *Journal of Regulatory Economics* 20 (1): 61-90.

- Savas, E. (1987) *Privatization: The Key to Better Government*. London: Royal Institute of International Affairs.
- Sheshinski, E. and Lopez-Calva, L. (2003) 'Privatization and its Benefits: Theory and Evidence', *CESifo Economic Studies* 49 (3): 429-59.
- Smets, H. (2004) 'De l'eau pour tous'. Académie de l'Eau. <http://academie.oieau.fr/>, accessed 25 August 2005.
- Smith A. (1976) *An Inquiry into the Nature and Causes of the Wealth of Nations. Vol. 1*. Chicago: University of Chicago Press.
- UNCTAD (2002) *World Investment Report 2000: Cross-Border Mergers and Acquisitions*. Geneva: UNCTAD.
- United Nations (2005) *The Equity Predicament: Report of the World Social Situation 2005*. New York: United Nations.
- United Nations Development Programme (2005) *Human Development Report 2005*. New York: Oxford University Press for UNDP.
- United Nations Educational, Scientific and Cultural Organization (2006) *The United Nations World Water Report 2: Water, a Shared Responsibility*. Paris: UNESCO.
- WHO (2005) *Celebrating Water for Life: The International Decade for Action 2005-15, an Advocacy Guide*. Geneva: WHO.
- WHO (2003) *Domestic Water Quantity, Service, Level and Health*. Geneva: WHO.
- WHO and UNICEF (2004) *Meeting the MDG Drinking Water and Sanitation Target: A Mid-Term Assessment of Progress*. New York: WHO and UNICEF.
- Williamson, J. (1994) 'In Search of a Manual for Technopols', in J. Williamson (ed.), *The Political Economy of Policy Reform*. Washington, DC: Institute of International Economics.
- World Bank (2006) *Approaches to Private Participation in Water Services: A Toolkit*. Washington, DC: World Bank.
- World Bank (2005a) *World Development Indicators 2005*. Washington, DC: World Bank.
- World Bank (2005b) *World Development Report 2006: Equity and Development*. New York: Oxford University Press for the World Bank.
- World Bank (2005c) *Economic Growth in the 1990s: Learning from a Decade of Reform*. Washington, DC: World Bank.
- World Bank (2005d) 'Review of World Bank Conditionality', paper prepared for the Development Committee of the World Bank and IMF, September.
- World Bank (2005e) 'Infrastructure and the World Bank: A Progress Report'. Paper prepared for the Development Committee of the World Bank and IMF, September.
- World Bank (2004a) *Water Resources Sector Strategy: Strategic Directions for World Bank Engagement*. Washington, DC: World Bank.
- World Bank (2004b) *Public and Private Sector Roles in Water Supply and Sanitation Services: Operation Guidance for World Bank Group Staff*. Washington, DC: World Bank.
- World Bank (2003a) 'Water Supply and Sanitation and the Millennium Development Goals'. Report prepared for the Development Committee of the World Bank and IMF, September. Washington, DC: World Bank.
- World Bank (2003b) *World Development Report 2004, Making Services Work for the Poor*. New York: Oxford University Press for the World Bank.
- World Bank (1995) *Bureaucrats in Business*. World Bank Policy Research Report. Washington, DC: World Bank.
- World Development Movement (2006) 'Pipe Dreams?'. World Development Movement, www.wdm.org.uk, accessed 27 April 2006.
- World Development Movement (2005) 'Denying Democracy: How the IMF and World Bank take Power from the People', www.wdm.org
- World Water Council (2006a) 'Costing MDG Target 10 on Water Supply and Sanitation: Comparative Analysis, Obstacles and Recommendations', www.worldwatercouncil.org
- World Water Council (2006b) 'Task Force on Financing Water for All: Report 1: Enhancing Access to Finance for Local Governments' (chaired by Angel Gurría), www.worldwatercouncil.org
- Yarrow, G. (1999) 'A Theory of Privatization: Why Bureaucrats are still in Business', *World Development* 27 (1): 157-68.
- Zhang, Y., Parker, D. and Kirkpatrick, C. (2005) 'Competition, Regulation and Privatization of Electricity Generation in Developing Countries: Does the Sequencing of the Reforms Matter?', *Quarterly Review of Economics and Finance* 45 (2-3): 358-79.