

# THE WATER SECTOR'S EVOLUTION: KEY CHALLENGES AND FUTURE PROSPECTS

**María Elena Fernández García**

Centrum Católica Graduate Business School, Pontificia Universidad Católica del Perú, Lima, Perú.

## Article Info

**Keywords:** Water Supply  
Utilities, Industry  
Consolidation, Economic  
Significance, Environmental  
Standards, Public Vigilance

## DOI

10.5281/zenodo.13141875

## Abstract

Water supply utilities, once operating under the radar, are now facing increased scrutiny due to rising standards for drinking water and environmental protection, alongside heightened public awareness and financial challenges. This scrutiny has led to a diminishing confidence in the competence and sustainability of these utilities. Despite these challenges, the water industry remains a significant and expanding sector whose economic impact is becoming more apparent. The industry, characterized by diverse growth rates across its various segments, is increasingly consolidating and evolving into a more cohesive and unified field. This study examines the current state of the water supply utilities sector, highlighting the pressures driving changes and the implications for its future development. By analyzing the trends and transformations within the industry, the research aims to provide a comprehensive understanding of its economic significance and the ongoing shifts towards a more integrated approach.

## INTRODUCTION

Once unnoticed, water supply utilities are now the centre of attention. Escalating drinking water and environmental standards and increasing public vigilance and financial problems are leading to decreasing confidence in their competence and sustainability. Yet water industry is a large and growing business whose true economic significance is only beginning to be realized. While the growth in various sectors of water industry varies, the industry seems to be consolidating and coalescing into more of a unified industry.

In the United States, which many like to consider the bastion of capitalism and free enterprise, resistance to private water systems continues since the 19<sup>th</sup> century. As of now, the percentage of population served by the private organisations (including publicly owned systems operated by the private sector) is only 12%. Misfortunes of high visibility privatization projects are often dubbed as people's victory by the popular press and the early predictions of rapid privatization are no longer valid. Acceptance of private water projects is wider in Europe. Thatcherite privatization in UK generated considerable opposition at the time, but by this time, 45% of the population in Europe is being served by private operators. Rapid growth is visible in Mediterranean and North African regions. Overall, privatization escalated all over the world in the 1990's but stumbled thereafter due to

opposition from the civil society groups, especially in developing countries leading to what came to be known as „water wars“.

The term “water wars” referred originally to the famous protests in Cochabamba, Bolivia, in 2000, when the government handed over the control of water supply of that city to consortium headed by the US construction company Bechtel. The politicians who organized the people against the government have reaped rich benefits in terms of popularity, with many of them now occupying high political offices including the presidency of the republic. There have been similar street battles in other countries with tragic loss of lives. Inevitably, the battles have been reflected in acrimonious debates among policy analysts. Some of the literature has been academic while much of the populist and polemical debate has taken place on the web. During the last seven years or so, there has been some thaw in opposition to privatization and as shown in Figure 1, overall activity in terms of the number people being served by the private sector seems to be continuing to advance especially in developing countries.

### **THE BUSINESS OF UNIVERSAL COVERAGE**

Safe drinking water was formally recognized as a basic need in the 1970's (ILO, 1976). In November 1980, the UN declared that the next ten years would bring 'safe water and sanitation for all'. The then UN's Secretary-general, Kurt Waldheim, announced at the time that the goal was 'eminently achievable'. Faster construction of water supply and sanitation systems all over the developing world was the declared aim of the International Drinking Water Supply and Sanitation Decade and the WHO estimated that services were laid out as twice the rate of the 1970s, and yet universal access was nowhere on the horizon when at the end of the decade, global consultations were held in Delhi, India in September, 1990. The Delhi Declaration called for

„Water for all“ by with the slogan of „some for all, rather than more for some“. The declaration was adopted by the United Nations General Assembly as „strategy for the nineties“. In retrospect, it seems surprising that such an egalitarian declaration achieved a broad consensus considering that neo-classical economics was in ascendance at the time. Inevitably, when the policy initiatives emerged out of this declaration, World Bank and donor countries found „welfare state connotations“ of Delhi Declaration disconcerting. Within two years, the influence of neoliberal ideas became evident and the 1992 Dublin Principles illustrated their perspective in the fourth principle by stating that “Water has an economic value in all its competing uses and should be recognized as an economic good” (WMO, 1992). Neoliberal diagnosis was stated clearly: “past failure to recognize the economic value of water has led to wasteful and environmentally damaging uses of the resource. The increased role of the markets was recommended for managing water as an economic good. International aid agencies adopted Dublin Principles and actively promoted the role of the private sector in provision of drinking water. It has been alleged, however, that this change of course, especially in case of bilateral aid agencies, was not as much out of concern for universal coverage as for promotion of business of their water companies (Budd and McGranahan, 2003).

Meanwhile, those opposing privatisation were campaigning to get drinking water declared as a human right. Since human rights have no hierarchy, it was expected that water as a human right would be deemed to be as important as other rights mentioned in the Universal Declaration of Human Rights (UDHR) of 1948. This move was not without controversy. At the UN Commission on Human Rights in 2002, Canada voted against the Right to Drinking Water insisting that international law should not recognize the existence of a right to water as this is a domestic issue for each country. Consequent to heavy lobbying from the governments of the Global South and Northern NGO's, the UN Committee on Economic, Social and Cultural Rights developed a General Comment, which confirms that the right to water is implicitly contained in the International Covenant on Economic, Social and Cultural Rights. This Comment (No. 15) adopted by the UN Committee on Economic, Social and Cultural Rights at its twenty-ninth session in November 2002 affirmed that „the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses“. A General

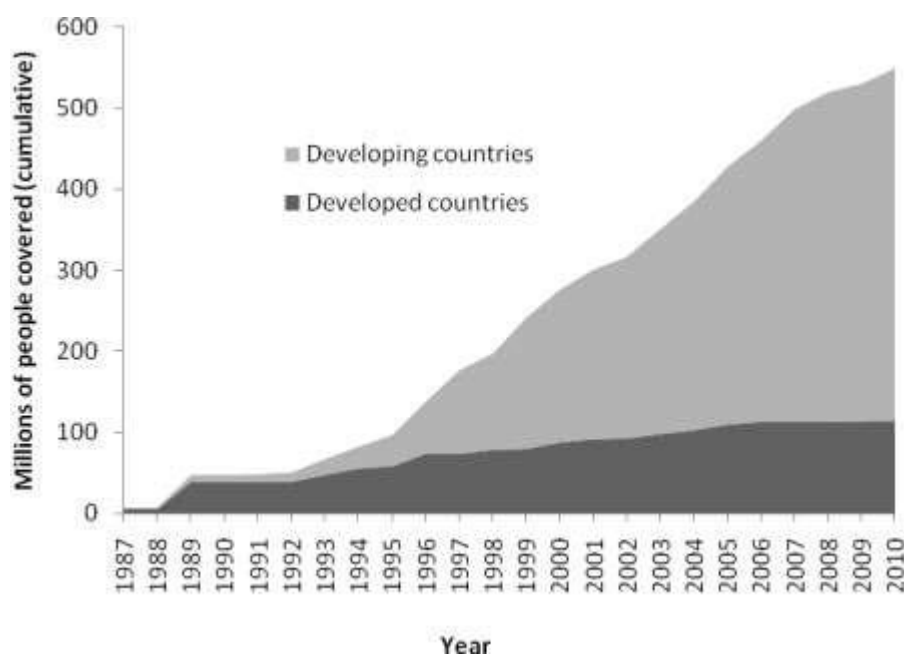
Comment is only an interpretive tool and does not, in itself, constitute legally binding 'hard law'. Even so, the General Comment gained wide acceptance amongst many States and intergovernmental organisations, including the World Bank. On July 28, 2010, the United National General Assembly voted (with 41 abstentions) on a non-binding resolution recognizing the right to water and acknowledged that clean drinking water is integral to the realization of all human rights. On 30 September, 2010, the Human Rights Council, responsible for mainstreaming human rights within the UN system, adopted by consensus a resolution affirming drinking water as a human right. Canada, the United States and more than two-thirds of the European Union are opposed to international action in this regard and therefore do not recognize human right to water.

A related unresolved issue relates to the role of business with respect to human rights. The United Nations has not acceded to the demands of the human rights advocacy groups that the same range of human rights duties be imposed on private business that the States have accepted for themselves under treaties the latter have ratified. Norms drafted to this effect by a committee appointed by the UN were opposed by the business groups and were finally rejected by the concerned UN body in 2005. After several years of deliberation, in June 2011, the UN Human Rights Council endorsed the "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework" proposed by UN Special Representative John Ruggie. These guiding principles mainly relate to rights at work and rights mentioned in the UDHR. Case law relating to water as human right has not yet developed. There is little shared knowledge across different stakeholder groups in the water business and human rights domain. Since most developing countries recognize water as a human right, those in water business need to plan ahead before they receive nasty surprises. Normally, the quantity of water supplied in terms of liters per capita per day would not cause a problem as the drinking water supplied by the private sector is more than that considered adequate for personal use, but affordable price could be a cause for controversy. Also, while the right to water does not mean free water, a water utility would still need to evolve a policy as to how and when to deny water supply to a consumer for non-payment of bill if no alternative supply of drinking water is available to the consumer. A trickier area could be enhanced coverage. The governments usually sell privatisation on the grounds that it would lead to coverage of uncovered areas; but quite often, the coverage does not increase to the extent promised (Clarke et al., 2009).

The water business enterprise will need embed their responsibility to respect the right to water by expressing their commitment to meet this responsibility through a statement of policy that is informed by relevant expertise and is approved at the highest level in the company. The statement needs to stipulate expectations from personnel and partners directly linked to the operation of drinking water supply, communicate the same to all stakeholders, be publicly available and reflected in operational procedures. With the help of rights groups, the enterprise would need to set up a non-judicial grievance redressal mechanism. In addition, the enterprise will also need to carry out a human rights due diligence which could be an ongoing process as the operating context evolves.

### **WATER BUSINESS AND CORRUPTION**

Water business has an old unsavory reputation both in developed and developing countries. Grand Rapids, Michigan Water Scandal of 1900 in which a bribe of \$ 100,000 was passed on was a typical case of municipal corruption in those days which the people found "as fascinating as a dime novel" (McGerr, 2003). Recent spectacles of corruption include prosecution against officers and agents of Lyonnaise des Eaux in France, Vivendi (now Veolia) in France and Italy and Siemens, Pirelli, BICC, Marubeni and Tomen in Singapore, not to mention the grand larceny in developing countries. The water sector is particularly vulnerable to corruption because the technical complexity required to design and construct water infrastructure projects leaves less room for public transparency and leads to information asymmetry. Water sector is also complex in the sense that it involves a multitude of actors. This leaves water governance dispersed across political boundaries and several agencies



**Figure 1.** Population served by private sector water companies.

which makes effective regulation and oversight difficult. The atmosphere of discretionary action opens up for many loopholes especially when high demand for water services reinforces the power position of suppliers. High capital intensity combined with a high frequency of interaction with suppliers and procurers makes procurement and contract implementation easy to manipulate. Kiltgaard's (1988) equation „corruption = monopoly + discretion – accountability“ is useful for understanding why corruption in water sector is ubiquitous at every point along the water delivery chain, including policy design, budget allocation and operation.

According to Global Corruption Report 2008, in wealthier countries, corruption is concentrated in awarding of contracts for building and operating municipal water structure. The report notes that the stakes are high as this market is worth an estimated US\$ 210 billion annually in Western Europe, North America and Japan alone (Transparency International, 2008). Further, corrupt practices have caused water shortages in some countries like Spain. In respect of the developing countries, according to this report, corruption inflates the overall cost for achievement of Millennium Development Goal (MGD) in respect of drinking water by US\$ 48 billion. Sub-Saharan Africa seems to be worst placed region in this respect. In the successive yearly corruption perception indices compiled by Transparency

International nearly half of the twenty countries that perform worst in the index come from the region.

At the same time, this region is not moving with adequate speed towards achievement of MGD in respect of drinking water.

Worldwide, privatisation of water supplies has progressed on economic grounds while losing the political wars with the public perception that privatisation deals were corrupt. This perception has been the primary determinant of the political outcome. Numerous water privatisation efforts have failed in Latin America, Africa, Asia and the United States, following opposition from public interest groups. These groups have claimed with some justification that the deals were not transparent because of which the water rates rose unreasonably and the promised service improvements were not carried out. The most high-profile reversal came in 2000 in

Cochabamba, Bolivia, mentioned earlier where negotiations were carried out with only one firm. Transparency is essential for privatisation to be viewed as politically legitimate. From the point of view of the government, an effective way to combat corruption in privatisation is by increasing the flow of information to the public - on transactions, on the financial and operational performance of state-owned firms prior to sale and on expectations after privatisation. At the same time, the businesses cannot shirk their responsibility. There was a time when bribing the officials of the third world countries was not only legitimate, in many developed countries it was tax deductible. In the US, Foreign Corrupt Practices Act (FCPA) had been on the statute book since 1977 but not many people were even aware of its existence. Due to pressure from the civil society groups, toughening is noticeable on the part of Western governments. Recent years have seen a spurt in crafting anti-bribery laws as also enforcement of existing laws. A new British antibribery law, passed in 2010, even makes small “facilitation payments” to speed up routine business punishable.

OECD’s bribery convention requires members to change their legal system and open law-enforcement systems to intense external scrutiny and the members are subject to public naming and shaming when they breach them. Enforcement of FCPA has gone up steadily from 5 actions in 2004 to 74 in 2010. It is no longer possible for any CEO to claim with a sophisticated shrug that doing deals in Africa always means paying kickbacks.

If businesses in the water sector are serious about combating corruption, instead of forming a cartel, the industry groups could form an ethics committee. Stung by allegations of unjustified overpricing, companies accounting for almost all of supply for water pipes in Columbia - American Pipe and Construction, PVC Gerfor, Titán Manufacturas de Cemento, Tubotec, Celta, Colombiana de Extrusión-Exrucol and Flowtite Andercol – formed an ethics committee which includes outside experts. The committee has been successful in pointing out specific cases of irregularities in procurement forcing the Government authorities to make amends.

## **EFFICIENCY AND COST**

The water business in private sector is likely to be more efficient than public utilities which are often overstaffed, technologically challenged and corrupt (Segerfeldt, 2005; World Bank, 2006). However, this would not automatically result in lower prices for the consumers. The main argument against private business entering water sector is that it increases prices, making water unaffordable for millions of poor people. It is argued that as a natural monopolist, the business finds it easier to increase prices rather than increasing returns to scale by increasing coverage. This could be controlled by having private sector compete for the right to sell water to the market and to award this right to the company offering to sell this water at the lowest price. Even so, the cost to the consumer is likely to increase as public subsidies to the water utility would be discontinued or drastically reduced. In developing countries, these subsidies amount to \$ 45 billion per year and on average the average are as high as 70% of the costs (Segerfeldt, 2005). Ideally, the reform including raising prices should precede privatisation. This was the case in Gabon where it required ten years of ground work to bring the tariffs to the level reflecting cost (Tremolet and Neale, 2002). In the event Vivendi won a concession contract based on a 17.25% price cut. Revenue recovery could also be more efficient under private sector management. For example, in Buenos Aires, the private company found that 11% of properties classified as residential were actually nonresidential and another six per cent had under-reported their size. Reclassification resulted in increased fee from 425,000 customers.

In most cases, tariffs go up when private business takes over water utilities and quite often prices increase in a haphazard manner. When the private operator took control of the Buenos Aires water supply, average tariffs were cut by 27%. Next year, the prices were increased by 13% and three years later by another 27% and increases continued till 2002 before the currency crisis hit the country. In early 2002, prices were about 93% higher in real terms than they were at the time of privatisation (Delfino et al., 2007).

The focus of studies on price increases has been on the consumers who are already connected to the piped water supply systems. Those who are not connected usually purchase lower quality water from vendors paying, on average, 12 times the price of water from the regular mains. Therefore, availability of a water connection at doubles the existing price would give poor people substantial economic benefits (Segerfeldt, 2005). These people, however, are trapped in poverty and have no voice. A coalition of potential beneficiaries does not exist. On the other hand, those already connected to the system have a vested interest in subsidized water available from a public utility and get support from public utility employees as also from anti-business NGO's in their bid to retain the status quo.

**Table 1.** Business responsibility in PSP.

<u>Variable</u>	<u>Service/ management contract</u>	<u>Affermage/ lease</u>	<u>Concession</u>	<u>BOT</u>	<u>BOO</u>	<u>Divestiture</u>
Ownership	No	No	No	No	Yes	Yes
Investment	No	No	No	Yes	Yes	Yes
Risk	No	Shared	Yes	Yes	Yes	Yes
O&M	Yes	Yes	Yes	Yes	Yes	Yes
Duration	Short	Medium	Medium	Long	Long	Indefinite
	Increasing	public	opposition			

## FERMENT AND THE FUTURE

According to Global Water Intelligence, about 16% of the world's population will be served by the private operators by 2015. In the recent years, more national and regional level companies have been getting contracts as compared to global players. Another notable feature is the increasing tendency for national companies of developing countries to gain these contracts, which until 1995 were regarded as being almost exclusively the domain of companies from developed countries. Big contracts (for example, Buenos Aires in 1993 and Jakarta in 1997) created controversies preparing ground for water wars of the next decade. Inevitably, there was a move away from mega-contracts to smaller and possibly less contentious contracts. The average contract size has diminished since the 1990s. However, this trend may not continue as evident from an IPO issued in 2010 for a mega contract for water supply in Chongqing, China.

Water sector is in ferment and the businesses seem to be slow to respond to new challenges. While economic challenges are daunting, political considerations need to be given priority. Businesspersons should not consider it strange that large number of people consider the idea of profit being made out of water abhorrent. After all, the number of for-profit institutions in the public education sector is quite small as compared to public and non-profit institutions. Blaming the occasional distress of water companies on vested interests and anti-business groups is counterproductive. Given the experience of water wars, the degree of privatisation in future is likely to be decided primarily by politics. The business opportunities for private businesses will accelerate but neither in the United States nor in developing countries, will there be divestiture of the type that occurred in England and Wales. Many developing countries are trying Private Public-Community Partnership; but these experiments are only on a small scale. In bigger projects, developing countries are trying to sell the idea of Private-Public Partnership (PPP) for Private Sector Participation (PSP), because the objectives of the two „partners“ are quite different. The type of participation being tried out is given in Table 1.

In countries where the idea of privatisation leads to fierce resistance and social strife, only service contracts and management contracts are possible. This could be the initial approach in South Asia and some countries of Latin America like Bolivia and Perú. Later, the business could move on to Affermage and Lease. When going in for concessions, the business will need to look at the foreign exchange risk. Devaluation of Peso in Argentina in 2002 caused such a problem that the net worth of the water utility became negative. There is tendency to underbid for contracts as the bidders are confident that the contract can be renegotiated. This tendency has been widespread in Latin America where three fourths of the contracts signed in the 1990's was renegotiated within an average period of 19 months after signing the contract (Gausch, 2004). In view of public criticism, this option may not be available in future and the business will have to assess the realistic costs and hedge their bets. As compared to the rest of infrastructure businesses, where often technology is the main issue, the water business is likely to get more and more complex.

## CONCLUSION

There is general agreement that public utilities have been too slow in extending access to services and that they can be inefficient and corrupt. At the same time, increasing private sector involvement to address these problems remains controversial. Most of the research in water business is in the form of case studies. There is need for more of econometric research based on natural experiments. The water business brings fresh capital for investment in infrastructure. However, the loans are usually in dollars but the tariff is denominated in local currency. The business needs to hedge the currency risk in a professional manner instead of trying to re-negotiate the contract by bribing the politicians. The water business is being wrong footed both by human rights groups and anti-corruption activists. Individual water companies need to clean up their act and business groups need to do more by taking effective measures like forming ethics committees. The water business needs to go beyond technocratic solutions to problems and involve stakeholders in formulating innovative solutions. Considering that incomes in developing countries are rising and that one billion people are without safe water and perhaps several times that number do not have tap water on demand, the potential market is huge. This market can be profitably tapped only when water business eschews short-termism and rises to the new challenges.

## REFERENCES

- Budd J, McGranahan G (2003). Are the debates on water privatization missing the point? Experiences from Africa, Asia and Latin America. *Environ. Urban*, 15(2): 87-113.
- Clarke GRG, Kosec K, Wallsten S (2009). Has Private Participation in water and sewerage improved coverage. *J. Int. Dev.*, 21(3): 327-361.
- Delfino JA, Casarin AA, DElfino ME (2007). How far does it go? The Buenos Aires concession: A decade after the reform. UNRISD, Geneva.
- ILO International Labour Office (1976). *Employment Growth and Basic Needs: a one-world problem: Report of the Director-General of the International Labour Office*. Geneva: I.L.O.
- Klitgaard RE (1988). *Controlling Corruption*. Berkley, CA: University of California Press.
- McGerr M (2003). *A Fierce Discontent: The Rise and Fall of the Progressive Movement in America, 1870-1920*. New York: Oxford University Press.

- Segerfeldt F (2005). Water for Sale: How Business and Market can resolve the World's Water Crisis. Cato Institute, Washington DC.
- Stottman W (2000). The role of the private sector in the provision of water and wastewater services in urban areas. In Water for Urban Areas, Uitto JI, Biswas AK (eds.). United Nations University Press, Tokyo, pp. 156-199.
- Transparency International (2008). Global Corruption Report: Corruption in the Water Sector. Berlin: Transparency International.
- Tremolet S, Neale J (2002). Emerging Lessons in Private Provision of Infrastructure Services in Rural Areas: Water and Electricity Services in Gabon. World Bank, Washington, DC.
- WMO, World Meteorological Organisation (1992) International Conference on Water and the Environment: the Dublin Statement and Report of the Conference. Geneva: WMO.
- World Bank (2006). Approaches to Private Participation in Water Services. World Bank, Washington, DC.