

The role of the private sector in peri-urban or rural water services in emerging countries

Bertrand Dardenne
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Abstract

Private players in water supply services in developing countries are generally either too big (large international operators) or too small (informal vendors), with respect to the size that would be adequate for the needs of the low-income areas.

Large international operators made efforts to address the needs of the peri-urban or rural clusters. They obtained some promising results. No evidence can be found in the present situation in order to conclude whether the capacity to supply the poor is inherently linked to the private or public nature of the operator. Regulation concerns are fundamental, but the key issue seems to be more how to conceive a public service utility, universal and egalitarian, in cities or countries with an excessively imbalanced income distribution.

Small informal players are generally ignored by the authorities, although they serve between 25 and 50 % of the households in many developing countries. Their participation, as long as it is accompanied by more positive policies, could help the achievement of the MDGs. Interesting cases can be pointed out in some countries.

The strategy recommended by the author is to promote the constitution of a mid-size private offer, capable of responding to the needs of the deprived areas.

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The role of the private sector in peri-urban or rural water services in emerging countries¹

Bertrand Dardenne

1. Introduction

Private players in the water supply business, today, are usually synonymous, in the understanding of sector experts, either with large multinational companies that are focused on service management in big cities, or with small and informal local providers who are filling the gaps left by deficient utilities. Between these two extremes, mid-sized enterprises seem rather non-existent in most of the developing countries.

It is often considered that large international operators are not equipped to address in an efficient way the critical issues linked to low-income areas, both in peri-urban and rural situations..

On the other hand , the professionals remain at best suspicious of the small private water providers (SPWPs). Unorganised vendors are too small to be regulated.

The present background paper has been written in order to introduce the session on *What role for the private sector in peri-urban and rural areas* of the OECD Global Forum on Sustainable Development dedicated to “Public-Private Partnerships in Water Supply and Sanitation – Recent Trends and New Opportunities” (Paris, November, 2006).



Photo 1 – Informal water supply through metered piping in an African shanty town

It intends to survey the last findings on :

- How large international private operators are handling the challenge of delivering water services to low-income areas ?
- Who are the small private providers and what can be expected from them ?
- Why are the mid-sized companies so scarce ?

¹ Background Issues Paper for the OECD Global Forum on Sustainable Development, “*Public-Private Partnerships in Water Supply and Sanitation – Recent Trends and New Opportunities*”, November 29-30 2006, Paris.

- What are the new challenges for regulation policies and international cooperation ?

2. The large international private operators and the poor

Water is an economic good as well as a social good, and needs to be managed as such.

The “social good” aspect is linked to the social commitment to give access to:

- a minimum quantity of water,
- with an acceptable quality standard,
- and at a sufficiently modest price to be affordable by every household.

Beyond that social commitment, water becomes an “economic good”, as any other commodity, although the business requires a strong regulation framework to avoid monopolistic abuses.

Through that prism, the private sector has naturally some space in the provisioning water, as long as it can make enough money on the business part, to compensate the possible loss that could arise from the imposed obligation to fulfil the social service.

Compared to pure urban areas, peri-urban and rural clusters are obviously less attractive: lower population densities or anarchical urbanism increase investment and operational costs per capita, meanwhile lower levels of welfare are shrinking the average consumption and the capacity to pay.

Nevertheless, the positive balance sought by the private companies to end with some profit is essentially dependent on the contracting rules and the regulatory framework in which they are engaged. The fact that the global economic equilibrium of water provisioning for low-income areas is not achieved does not hinder their participation in the operation, as long as subsidies compensate the gap that tariff cannot fill.

2.1. The need to address poverty

Since the 90s, the larger international WS&S operators were invited, or invited themselves, to demonstrate what they could propose in developing countries. Multinational companies, mainly the two French giants, occasionally teaming up with wealthy national financial groups, have managed diverse large cities. Some cases have been successful and are still on (Casablanca, Gabon); while others collapsed. Different contract types and business models were tried, while an intense debate took place and still goes on among the WS&S community and the policy makers.

What has been less visible to the outsider is the fact that the same debate has been as intense, internally, within these large companies. Developing activities in emerging countries is of course a way to substantially increase turnover and enlarge the business geographies, but does it actually lead to profitability, and at what risk ?

To takeover the water supply of a city or a larger territory in a developing country necessarily means to have to address the needs of the poorer population.

Large international groups have no direct interest in peri-urban or rural areas. From a capitalistic point of view, the poor are unattractive. However, it is obvious that they cannot takeover a former publicly-held service at a metropolis or at a nationwide level, without including the deprived zones. Therefore, designing solutions to maintain supply to the poor becomes a key challenge, not only to win a contract, but also to legitimise their market penetration strategy in emerging countries.

There was no way for Lyonnaise des Eaux to win a 1,7 million inhabitants contract in La Paz, without committing itself to provide 71,000 new connexions in the poor settlements of El Alto.

Neither for Veolia to sign a 10-year partnership contract with the State of Niger without providing water to 52 rural districts over the country.²

In this kind of business, the range of profits that can be expected from the wealthier downtown is much more regulated than the depth of the losses that could result from the social commitments in the periphery.

However, these professional operators did not have any clear approach to the problem. Experience was lacking. They started working hard on the solutions they could provide to the poor. They brought enthusiastic teams within their organization, with full-time dedication to study the needs of slums, favelas and other informal settlements and to elaborate imaginative solutions. It would be wrong to say that they have neglected the poor.

As a matter of fact, some interesting ventures have been undertaken.

2.2. Some promising results

2.2.1. Buenos Aires

As it is a common reality in the large Latin American cities, the metropolitan area of Buenos Aires is marked by strong contrasts. 54 % of the twelve million people live below a poverty line corresponding to a monthly income of 240 US\$ per adult equivalent.

In 1993, the Lyonnaise des Eaux group (today Suez) won the tender for the water and sewage concession of the Argentine capital. The concession perimeter included, in rough numbers, ten million inhabitants, of which two million lived in 593 neighbourhoods classified as deprived. The half of these low-income clusters are fully urbanized, corresponding to large groups of low-standard buildings built in the 1950s (*barrio armado*). The other half are slums (*villa miseria*), or poor peri-urban neighbourhoods (*barrio precario*), originating from illegal land occupation (*asentamiento*) or planned settlements for the poor (*loteo popular*).

The 30-year contract did not include the slums, which were not considered as “urbanized”. Additionally, the concessionaire had no direct commitment on the internal networks and end-user delivery in the *barrios armados* condominiums. Thus, the contract obligation of the concessionaire towards the low-income neighbourhoods was basically restricted to the *barrios precarios*.

Every five years, Aguas Argentina, the concessionaire company set up by the private shareholders has to submit an investment plan for the coming five years to the regulatory agency, as well as the required tariff adjustments. Once discussed and approved by the Regulator, the five-year plan becomes a firm commitment for the operator.

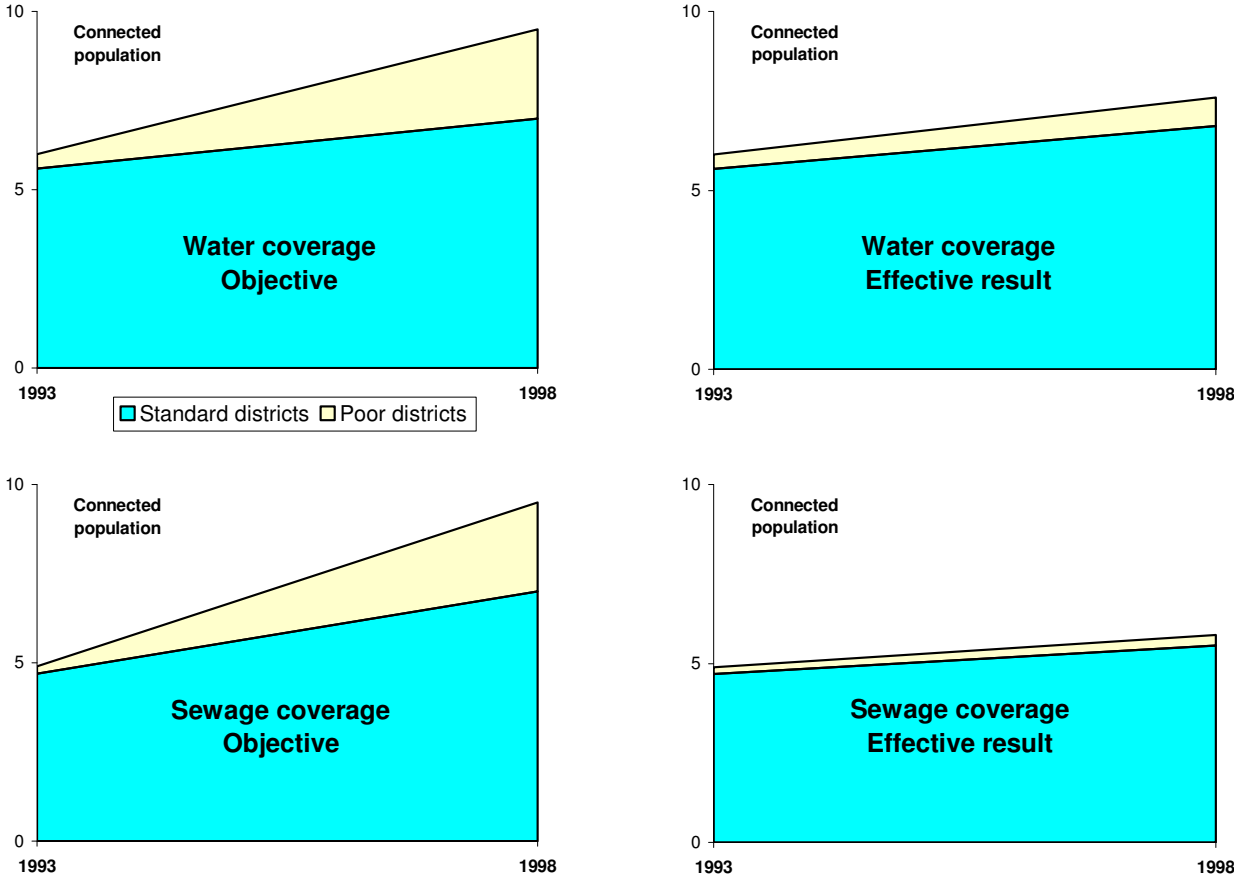
The first plan, kicked off with the takeover in 1993, included an enormous target, to integrate 3.5 million new customers to the network, 65 % of whom belonging to the poor neighbourhoods.

Aguas Argentinas quickly perceived how challenging was this objective. A certain freedom was given to the concessionaire to build up a strategy in order to achieve the goal. A specific department within the company was set up to deal with poor neighbourhoods. Some partnerships were established with NGOs, devising a social approach, and working on appropriate technical and financial issues. The poor areas were extensively investigated. The studies, nevertheless, took time, and at the end of the first 5-year period, the effective result remained poor. As shown in Figure 1, no more than 0.4 million people were connected to water in the poor districts between 1993 and 1998, less than 20 % of the goal. The failure

² “Rural” may have a wide definition for WS&S purpose. It often includes small towns, which would be considered as “urban” by geographers.

was even worse for sewerage, with only 100.000 new inhabitants served, instead of the 2.3 million that was projected. The main effort was clearly dedicated to the standard districts.

Figure 1
BUENOS AIRES 1993 - 1998
Coverage objectives and effective results



Although the rather utopian initial goals were not achieved, it cannot be denied that water supply coverage increased significantly: From 70 % in 1993 to 80 % in 2001 and to 87 % in 2001, with 2,700 km of additional network length. The same occurred for sanitation coverage: From 58 % in 1993 to 64 % in 2001, with 1,270 km of new sewers.³

Expansion targets set by geographical area, with some priority given to low-income areas, ought to result in large numbers of new households being connected. But the privatisation preparation process led to some unfortunate decisions. . The cost of system expansion was supposed to be transferred to the new consumers through a hefty infrastructure charge. This was one of the issues that caused public unrest and early contract renegotiation. The very high connection charge, unaffordable for the poor, was later replaced by a bimonthly fee, levied on all customers regardless of when they connected to the network. Connection charges were reduced to US\$ 120 for water or sanitation; repayable over five years through interest-free fees averaging US\$ 4 per month. Despite the fact that the changes resulted in a 74 % decrease in average bills in poor areas, from US\$ 61 to US\$ 16, it remained debatable whether even at this level the rates was affordable for the poor. In addition, the renegotiation brought some reduction in expansion targets, with detrimental impact on the poor who are the primary residents of the excluded areas.

³ Breuil, 2004

In conclusion, the results of the initial period of the largest private WS&S concession of the world was generally perceived as negative on issues and achievements related to low-income areas. The stakeholders, however, became more pragmatic once they got over the disappointments resulting from their failure to achieve the bold political and commercial announcements of the contract launching time. The process of reflection started in 1993 finally bore some fruit.

In 1999, A Community Development Unit (CDU) was created, with the objective to define and implement a social back-up methodology for network expansion in the poor areas of the concession.

The CDU defined a series of projects to be carried out under a Participatory Management Model. A three-party agreement was established, through a contract between the company, the local community and the municipality:⁴

- The neighbourhood must request the service. The project will be launched only if 80 % of the local community agrees. The community needs to organize itself and choose its representatives. It will also provide manpower for the works.
- The municipality shall give the tools and the public subsidies. Approximately 50 US\$ per month are allocated to every household participating to the community labour program.
- Aguas Argentinas shall be responsible for the technical feasibility of the project, the procurement of the pipes and materials, as well as the technical training.

The installation of Participative Management Models marked the beginning of a new operational stage. Twelve projects were carried out in 2003, allowing 8,000 people to be connected. In 2004, 21 more projects resulted in 30,000 additional connected people.



Photo 2 – Community participation in Buenos Aires (Photo Aguas Argentinas)

Complementary activities were also set up: educational workshops, cultural projects related to sanitary concerns, etc. Aguas Argentinas fully assumed its role, coordinating a proactive participation process that involved all the stakeholders.

Unfortunately, the progress observed since 2001 regarding the specific issue of low-income areas, has been masked by the devaluation of the peso, which jeopardized the tight economic equilibrium of the concession and finally led to the termination of the contract.

After more than ten years of private operation, the outcome of the Buenos Aires experience is ambiguous. Only 25 % of the poor neighbourhoods inside the concession have access to water supply. But it may be stressed that neither the contracting authority, nor the private operator, had, at the time of the takeover, any practical proposal on what should be effectively done in the peri-urban areas. The simple agreement on the need to integrate development programmes towards low-income dwellings into the operator's duties was not enough. The company committed itself to a new and complex field of activities. As wrote Botton, Brailowski and Matthieussent (2004), *the work of the "developer" cannot be improvised.*

In 1993, Lyonnaise des Eaux group, as well as the other large international operators, did not have a mature knowledge or technology to address the poor. They could not propose a clear strategy leading to credible objectives, and could not avoid the pressure of goal inflation that surrounded contract negotiation. The negative conclusion to be drawn from the Buenos Aires experience is that it took more than six years to work out a methodology and an organization able to handle the peri-urban issues. Nevertheless, the good news is that an

⁴ Botton, Brailowski and Matthieussent, 2005, p. 18

appropriate solution finally evolved. Paradoxically, the national economic crisis of 2001, although it put in check the fundamentals of the concession contract, did not slow down the development of the low-income neighbourhood projects. The French group acquired a strong experience, which could be used in further opportunities, like in La Paz or Manaus.

2.2.2. La Paz – El Alto

Since 1997, the 30-year concession contract for water and sanitation services in La Paz and El Alto, is also managed by a Suez-Lyonnaise subsidiary, Aguas del Illimani. El Alto has a population of 650,000. It is a fast growing suburb of the Bolivian capital, with a current population growth rate of 5.1% per year. 66% of the inhabitants live below the poverty line. Most of the urban growth occurs in the peri-urban fringes of the city.

The tariff structure established by the regulating authority is characterized by prices that escalate according to consumption. The first block (30 m³ per month) is set at a very low price (0.22 US\$/m³) for both services. On the contrary, the connection fees are high compared to the average revenue.

As the tariff was already defined, the main selection criterion of the tender was the coverage rate to be achieved within the concession perimeter. Therefore, the contractual goals were clear, flexible and easy to monitor. The concession winner committed to achieve in five years 100 % coverage in La Paz and 71,752 new water connections in El Alto. Perhaps due to the former experience of Buenos Aires, the concessionaire was more proactive since the takeover. It succeeded in introducing new low cost and participative technology, such as the “condominial model” of sewerage, a concept which was imported from an outstanding successful experience developed in Northeast Brazil since the 1980s.

However, an important part of peri-urban areas in El Alto is inside the concession’s geographical boundaries, but not included in the area to be served. The concessionaire has no contract obligation vis-à-vis these suburbs, where no financial return can be expected under current conditions. Because of this definition, Aguas del Illimani is able to claim that is has achieved nearly full coverage for potable water (97 % in 2001), while the real coverage of the city population is probably closer to 60-65 %, considering the *concession area* instead of the *served perimeter*.

The concession was performed remarkably during the first five-year period. From 1997 to 2004, 77,000 new water connections and 58,000 new sewerage connections were provided . The contract has generated more criticism during the on-going second period, due to the exclusion of certain areas and the sharp deterioration of the general political climate. The violent collapse of the Cochabamba water concession, when the American-British operator was ousted from the other main project of the country, contributed to the radicalisation of an overt ideological opposition to private partnership. The negotiation process of 2002 has been difficult. The new network extensions required by the regulator were economically unviable, while tariff increase was simply out of the question. The political opposition against “water privatisation” focused on the fact that the concession left tens of thousands of poor families out of the process.

Thus, the concessionaire looked for a way to mitigate such a disastrous image. The strategy has been based on a partnership between local authorities, community organizations, the



Photo 3 – Peri-urban outskirts of El Alto (Photo Aguas del Illimani)

private operator and financing institutions. An on-going project is developing an innovative public-private partnership aimed at ensuring sustainable WSS to the low-income communities of the peri-urban areas of El Alto. The tariff, low as it is, is still high enough to offset the operating costs, if some other funding source provides the investment. Thus the concessionaire can expand the service towards the new zone, once the infrastructure implementation has been covered by a grant. An US\$ 7,5 million investment project is partially funded by Swiss aid, through a revolving fund for subsidized credit to the customers.

In conclusion, the concession of La Paz and El Alto shows a good example of a contract focusing on coverage extension towards low-income areas. It has been widely regarded as an example of “pro-poor” policy-making because the negotiation was based on maximizing the number of new connections. The operator was more experienced in dealing with the poor. It has been able to propose an optimal strategy since the takeover, introducing imaginative technologies and capacity to implement participative projects.

Nevertheless, the Bolivian concession reveals the limit of the PSP, and the inability to meet the needs of the poorest through a pure market-driven logic. Even with a consistent track record, the concession of La Paz – El Alto remains fragile when the political environment becomes adverse, due to other unsuccessful experiences that occurred in the country (Cochabamba) or due to radical ideological changes in the government.

2.2.3. Manila

Manila’s water and sanitation network was “privatised” in 1997 under two separate concessions, splitting the city into two zones. At that time, only two-thirds of the eleven million city residents were connected to the intermittent low-pressure network, and less than 10 % had access to sewerage. A number of small-scale water providers were already filling the gaps in service coverage left by the former water utility. As much as 30 percent of the population relied on their services.

While the contracts do not offer specific incentives for reaching the poor, they include an obligation to expand services, backed by financial penalties for non-compliance, and incentives when expansion goals are achieved.

The two concessionaire companies, Maynilad and the Manila Water Company (MWC), have embarked on a program of system expansion, and the number of residential consumers increased from 740,000 in 1997 to more than 900,000 in mid-2001. Both companies operate programs dedicated to poorer neighbourhoods, using low-cost schemes, and involving small-scale private providers.⁵

The contracts allow considerable freedom to the concessionaire to pilot new approaches to meet connection targets. Coverage can be increased with alternative technologies and innovative partnerships, involving third party players within the concession zone.

The concessionaires have exclusive rights to serve customers in their respective zones. But they are allowed to outsource the provision to third parties, as long as the concessionaire properly licenses the activity. This has helped the expansion of services to poorer households.

As such, many consumers are getting water through small local firms who buy water in bulk from the concessionaires and manage the distribution down to the end-user.



Photo 4 – Meter battery in a Manila street (Photo Maynilad)

⁵ PPIAF, 2002

In the eastern zone managed by Maynilad (subsidiary of Benpres and Suez), the *Bayan Tubig* (“Water for the community”) program was launched in 1999, in order to address peri-urban neighbourhoods. An underground line carries water up to the limit of the block, connecting to a battery of meters. From there, each homeowner makes his own above ground PVC piping towards his house. The project is therefore based on a concept similar to the “condominial” low-cost sewerage technology, which has been successfully experimented by the Suez group in El Alto. It is estimated that the Bayan Tubig project is reducing water costs for poor families by up to 25 %.⁶ Community based organisations and NGOs are playing a key role in the process. In July 2003, over 71,000 households had been connected under the Bayan Tubig program.

In the western zone, the other concessionaire, MWC (subsidiary of Ayala, Bechtel and United Utilities), introduced at the same time the TPSB - *Tubig Para sa Barangay* program (Water for Depressed Communities) offering group taps or community taps, where a few households or even an entire community is served with one metered connection. In June 2003, MWCI had completed 309 TPSB projects, totalling over 81,000 served households.



Photo 5 – Inauguration of a TPSB project (Photo MWCI)

Both programs were not part of the original contract obligations. The concessionaires undertook them after joint discussion with the regulator, in response to a perceived need.

MWC also developed bulk water sales to private resellers. The most famous example is the deal made with Inpart Engineering, a local family-run steel tank manufacturer. Inpart signed a BOT agreement to provide water to 17,000 households. It purchases bulk water from MWC and uses low cost small pipes or twenty-litre containers to supply customers.

MWC sells water at a commercial tariff (US\$ 0.39 per m³ in 2004) to Inpart, which resells it to the piped customer at US\$ 0.70. Connection is free, once the customer provides his own meter and a plumber for the installation. The distribution systems, including a 455 m³ reservoir and the plastic network, are fully financed by

Inpart, and will be transferred to the local government after the 20-year duration of the BOT. Each system is operated by an “*aguador*” from the community, who manages 100 to 200 clients. Inpart has invested US\$ 350,000 within five years to deliver water to approximately 25,000 households.

This strategy allowed MWCI to supply consumers that the company itself could not serve on a profitable scheme.⁷

As such, the concessionaires’ desire to serve the poor in Manila apparently goes beyond the simple coverage targets written in the contracts. In the frequent negotiations and disputes with the government, MWCI and Maynilad assumedly used their media-relayed activities towards the poor to strengthen their legitimacy as socially responsible companies.

Otherwise, tariffs for the depressed areas remain significantly higher, and every household has to religiously pay on time. Distribution through homeowners association and small private sub-contractors results in water prices four times higher than the concessionaire regulated rates. The increasing block tariff fails to ensure that low-income consumers pay less per cubic meter since the schemes used result in a larger consumption per “official” connection. The communities or private resellers are paying the bulk water purchased to the concessionaire at a higher unit rate. The classification of consumers would have to be

⁶ Rosenthal, 2001, p.9

⁷ Harris, 2002

reviewed, to avoid that purely residential uses of the poor end-user be not charged at unit price for business consumers.⁸

As a matter of fact, there is no doubt that peri-urban dwellings' access to water supply grew substantially with the "privatisation". Another positive effect is that the level of responsibility of the households increased, as they became partly responsible for managing their pipes. Losses are reduced, because illegal tapping and leakage are controlled by the consumers themselves.

2.2.4. Abidjan

Cote d'Ivoire was the first country in Sub-Saharan Africa to privatise its water, entering into a lease contract with a SAUR subsidiary, Sodeci, since 1960. It was a 12-year lease contract where Sodeci does not bear any responsibility for the infrastructure development. The private company operates the service and collects bills. It takes a negotiated operation fee for covering O&M costs and making its own profit, and deposits the rest into investment funds that belong to the state. The state decides the investments to be made. It pays using these funds, or any other complementary resources it may have access to.

Since the beginning, performance has been good: High water quality, high collection rate from private consumers, high labour productivity, low levels of unaccounted-for water (15 % in 1987).

In 1987, a new 20-year contract was renegotiated, covering Abidjan and all urban centres of the country. Provision of services to rural areas remained under public responsibility.

The contract between the government of Côte d'Ivoire and Sodeci contains several specific provisions aimed at providing benefits to the low-income residents. The central mechanism for serving the poor is a social tariff, coupled with the social connection, which is a fully subsidised connection provided to low-income households that meet certain criteria set by the government. Under these criteria, about 90 % of the 300,000 connections installed since 1988 were social connections.

The social connections are financed by a charge, added to the water bill, to be collected from all the customers.

Nevertheless, this coverage expansion policy is limited by the fact that the operator can only install connections in legal settlements. As an estimated 70 % of the unserved population is living in illegal dwellings, they cannot benefit. The institution of quarterly billing by the operator was another obstacle. The poor could not meet the requirements of such infrequent billing, and many were disconnected. Since this, billing conditions became more flexible and schemes to pay off arrears have been established, leading to an improvement of the collection performance.⁹

Unauthorized resale of water, generally through individual illegal connections, had become an important form of supply to the poorest people of the informal neighbourhoods, without household connection or too far from a public standpipe. In 1983, to address this issue, the utility and the government launched a campaign for authorised vending points. Customers could request a permit allowing them to resell water to the neighbourhood.

As is the case for all individual consumers, the vendor is required to provide a title deed, or landlord's permission - for rented premises. To deliver water to the unplanned neighbourhoods, the vendor is obliged to install himself at the edge of the planned areas, and to build extensive lengths of networks from that point to its customers. It means high

⁸ Cuaresma, 2004

⁹ PPIAF (2002), p 36

investment and more leakage losses downstream the meter, which will be charged by the utility.

Resellers are also subject to the normal tariff scales, and are therefore charged in the higher tariff block if they consume more than 50m³/month. As a result, the campaign to convert illegal connections into approved resellers did not make substantial gains. The number of agreed vendors declined in Abidjan, from 1.034 in 1995 to 581 in 1998, while the total volume of billed water came down from 648,000 m³ to 143,000 m³ during the same period.¹⁰

An association of the authorised water vendors, AREQUAP (Association des Revendeurs d'Eau des Quartiers Précaires) has been established in 1998, aiming at obtaining better recognition from the Sodeci and improving working conditions for its members. Among other issues, the association is lobbying for a more appropriate tariff regime, lower deposit amounts, shorter billing periods, protection from unfair competition by illegal vendors, etc. The association, with 147 members in 2000, is run by a management committee of eight members. Helped by a charismatic president, it became an important voice in the national sector debate.

Despite the mixed results of this experience, Sodeci's attempts to authorise resellers are worth noting. Recognition of SPWPs and appropriate contracting arrangements should be key aspects of a public water supply strategy towards the poor.

2.3. The dilemma of the “official operator”

The overall issue does not seem to be linked to the nature (public or private) of the official operator of a city or a region. The key point is to understand how the official operator, the utility, in charge of a large and disparate perimeter, might deal with the deprived areas.

The concept of public service comes from the European nineteenth century. It is based on ideas such as universality of the service (delivered to everyone), and equality of its access. The model of the exclusive concessionaire for a whole city is not by itself a pledge of performance. It works in industrialized countries, addressing a relatively homogeneous demand and a general consensus about what could be a rather standard offer. It implies a social agreement on a minimum quality of service. But what kind of social agreement can be expected in a Brazilian city where a part of the population has a way of life similar to any developed country, while another part is struggling in *favelas* ?

It is essential to keep in mind that the investment cost of a water supply facility roughly varies between 1 to 10, depending on the requested level of quality. The same occurs for wastewater.

The satisfying solution provided for the more wealthy residents, is leading to a “deluxe” service, compared to the basic expectation and the overall the willingness or capacity to pay of the poorest slices of the society.

When one is able to pay 10 for a sophisticated service, while the other is just accepting to pay 1 in order to have a minimal delivery, the natural demand-driven solution should be to tailor the offer, with different levels of proposals. Unfortunately, such an approach is not easily compatible with the concept of public service.

In the very first water concessions of the modern History, the “public service” was opposed to the “private service”. The deal between the public authority and the private company was simpler and clearer than nowadays. Against the obligation to deliver for free the “public service”, i.e. to supply a network of public fountains, hydrants and public bodies in a convenient manner, the municipality was conceding to the entrepreneur the right to develop a private service, i.e. to sell a more sophisticated service to the homeowners and industries

¹⁰ Collignon, Taisne and Sié Kouadio, 2000, p.15

interested in paying for something else than what was considered as the social commitment requested for everybody.¹¹

Unfortunately, the concept of “private service” disappeared with time. But a two-or-more-gear service is not easily handled by a unique utility company, either private or public, when it comes to political acceptance as well as management capacity.

The direct transplanted of the historical European model to developing countries, therefore, does not necessarily answer the needs, much more heterogeneous, of the low-income population.

The problem of the emerging countries is not just that their average revenue per capita is low. Inequality is also high, limiting the capacity to handle any concept of equity facing a public service. Unfortunately, poverty and income distribution issues will not be solved just through better water services arrangements.

The “official operator” is not the best qualified to implement and provide a second-tier service adapted to the needs of the peri-urban or rural settlements. It may and can use its skills to imagine and design a performing solution, both in terms of the organisation scheme and technical issues, but it is not cost effective, neither politically appropriate, to run the service by itself.

Meanwhile it is commonly agreed that private participation in water supply and sanitation services could bring factors which may be in short supply in the public sector, like financing leverage, management skills and technical know-how. Criticisms are often labelled against private utilities for what is perceived as a bias towards meeting the demands of upper and middle income groups and for not being responsive to ensure equality of access to the service for all segments of the civil society.¹² However, there is no evidence whether this issue is properly linked to the fact that the role of the monolithic operator is held by a private company.

In Argentina, the official target of former *Obras Sanitarias de la Nación*, the public entity in charge of Buenos Aires water supply before the privatisation, was to provide 700 litres per inhabitant per day. Tariffs were representative of this unbounded ambition. Of course, the public utility has not been able, due to heavy structural financial losses of the system, to develop the service towards the outskirts, leaving unequipped the poorest periphery of the city. The result was a good service on a sophisticated standard in the central districts, while the rest of the population was waiting for connections that never came. Access to water in the slums and *barrios precarios* of Buenos Aires has been mainly achieved by illegal connections, tapping into the surrounding “official” network, while the solution used by the poor neighbourhood further away from the equipped clusters was to pump water from the polluted underground water table by means of individual or collective wells.

If hoping that conventional networks will extend their benefits to all means ignoring the needs of the poor for at least one generation, alternative types of off-network services have to be provided urgently in the meantime. Large monopolistic utilities, either private or public have not proved their capacity to deal with this need.

Perhaps, the main difference between private and public utility is just that in the first case, the rules of the game need to be more explicit, then the contradictions are more apparent.

In the Abidjan or Manila examples, as in other developing cities, a coupling is observed between a primary network, operated by the official operator, and a lot of “retailers”, managing small network extension, selling water at fixed points or carrying it to the houses. The hereafter survey of the recent literature shows an increasing interest in observing micro-services, nested within large scale operations.

¹¹ Dardenne, 2005

¹² Ray and Kakebeeke, 1998

Following this approach, the duty of the utility, vis-à-vis low-income neighbourhoods, is basically to become a wholesaler, while small operators will be more likely to deliver a tailored service of proximity, fine-tuned with the real demand of their customers. The fact that they encroach on the monopoly of the “official operator” is nothing more than a jurisdictional concern. Monopoly is an abuse, even when legally endorsed, as far as it does not bring benefits to the local population.

But what service level has to be proposed to the poor, and who endorses what will be considered as satisfactory or not ?

In economic terms, access to modern services can substantially enhance the productivity of households and household-based micro-enterprises. Many of the traditional substitutes for modern services are time intensive. Time liberated from these tasks can potentially be reallocated to income generating activities, or, in the case of children, to education. Meanwhile, adequate use of water and better sanitation reduce disease.

Foster and Araujo (2004) studied the situation in Guatemala, where non-connected urban households are spending on an average two man-hours per week for collecting water. In rural areas, the average wasted time increases to four man-hours per week. However, even those connected to a network spend more than half an hour weekly collecting water, due to the frequency of shortage and the low reliability of the public service. Using the hourly earnings of rural workers in the agricultural sector (US\$ 0,50), this suggests that the value of weekly timesaving associated with piped water could be around US\$ 1.75.

From this perspective, the main question is not to determine what kind of ideal service wealthy people from Washington, Paris, or the richest areas of Guatemala Ciudad, think the poor deserve, but what is the more effective way to deliver a service that fits with the users' needs, for the money they estimate it is worth paying.

Ultimately, the WS&S community started to better conceptualise this issue, stressing on more demand-driven approaches, as Sara and Katz (1999) showed that water project sustainability is highly correlated to demand-responsiveness design.

2.4. Do private players run utilities more or less successfully than public operators ?

At first, it has to be remembered that the PSP debate in WS&S of developing countries basically appeared because, with the exception of Eastern Europe and some other cases, publicly owned utilities failed to provide an acceptable service, particularly to poor and rural households.

During the major part of last century, governments have defended public provision of infrastructure on the grounds that it can provide services to the poor that the private sector will not. However, by the early 1990s, it was clear that public utilities had done a dramatically poor job of reaching the poor.¹³

“Has the situation changed with the introduction of private provision ?” asked Caroline Van den Berg (2000). Her conclusion is that the distribution of benefits is not determined by privatisation alone. The way the tariff structure shares the costs of system development between the customers, large or small, new or already existing, has nothing to do with PSP.

Harris (2002) shares the same point of view, stressing that some concessions, as in Manila, have seen more rapid increases in coverage because the regulatory frameworks allow flexibility in the way households are served.

La Paz – El Alto shows positive results in terms of access to the poor, but simultaneously in the same country, the frustrated attempt to concede the water and sanitation service of

¹³ Clarke and Wallsten, 2002

Cochabamba led to a disaster. Following the introduction of private participation in the provision of water in Dakar, coverage of low-income households increased by 3.2% per year. The privately managed utility did better at connecting the poor than the 8 publicly-managed utilities in Africa for which data are available, as Clarke and Wallsten (2002) figured out.

McKenzie and Mookherjee (2003) studied diverse utilities of Argentina, Bolivia, Mexico and Nicaragua. They conclude that increased inequality or poverty following privatisation of utilities is unproved, although the statistical lack of evidence contrasts with popular perceptions. In Latin America, many claim that privatisation is done at the expense of the lower and middle classes.

More generally, the existing literature related to PSP and poverty in water services is basically formed by a few attempts to compare situations through econometrical and statistical data crunching, and a rather large number of case studies.

Econometrical studies are giving some evidences of the positive impact of the private sector on the operational performance, but its impact on the coverage and access to the service by the Poor is not demonstrated. Cross-country quantitative comparisons have generally been inconclusive.

Case studies are generally showing that the problem is more complicated. The relationship between PSP and the poor seems to remain complex and ambiguous, as Estache, Gomez-Lobo and Leipziger (2000) concluded. For them, some misconceptions should be avoided:

- To believe that status quo arrangements keeping public provision is beneficial to poor households
- To assert that subsidies benefit the poor, while the middle class tends to be the main beneficiary
- To consider that poor households are not willing to pay for a regular and reliable service, while they currently pay much more for a deficient service from private vendors
- To think that the role of the government ends once the private sector takes over utilities services.

Therefore, the way markets are restructured, the way competition is introduced and maintained and the way regulatory commitments are implemented determine whether privatisation is beneficial to poor households. The weaker the regulatory structure, the less likely the concerns of the poor will be accommodated.

As such, privatisation is not a substitute for responsible, re-distributive public welfare policies.

Clarke, Kosec and Wallsten (2004) explored the effects of PSP on water and sewerage coverage, through a large collection of Latin American experiences. They also concluded that private sector participation does not necessarily improve coverage but there is no evidence that the poor suffer as a result of private sector participation in water supply. In fact, coverage increased following the introduction of private sector participation, but it also improved in cities whose utility management remained in the hands of public entities.

Botton, Brailowski and Matthieussent (2005) compared two drinking water access programs dedicated to poor populations, respectively in Port-au-Prince and Buenos Aires. One has been carried out by a public utility, Haitian CAMEP. The other has been handled by private-owned Aguas Argentinas. Once more, the authors conclude that the nature of the operator is not the main factor in determining the success of such initiatives:

“On the contrary, one should move away from an ideological debate (public versus private operation) in order to focus on analyzing specific projects’ success conditions. That is, political will, quality of the partnerships, and last but not least, the degree of professionalism of the stakeholders in the industry and neighbourhoods.”¹⁴

¹⁴ Botton, Brailowsky and Matthieussent, 2005

Finally, while the ultimate authors who did large reviews of the existing literature conclude as well that empirical studies are not giving any evidence about the relative performance of private versus public utilities,¹⁵ the World Bank, through Kessides (2004) and others, admits that more in-depth analysis is needed.

New assessments are thus expected. The World Bank is for example launching an important study on the impact of private sector participation in the provision of water supply and sanitation services in Brazil. In that country, private concessionaires run 63 municipalities. The government is maintaining for twelve years a large data bank containing yearly information from water utilities that cover 95 % of the national urban population. While such a sample from one single country circumvents the difficulties of cross-country analysis, it would be interesting to check what consistency level the statistical processing will attain .

2.5. Adequate regulation is the answer

In fact, the public or private status of the operator is probably not the main criterion that might be considered. The social context, the institutional framework and the demand-driven approach, are, for example, extremely influential on the success of the service extension towards poor areas, irrespective of the ownership of the operator.

Some authors, like Parker et alii (2005), emphasize the role of regulation on poverty reduction.

PSP contracts or regulation stipulations may or may not prioritise coverage extension towards peripheral zones. If the private operator's obligation is not expressly exposed in the contract, it would be optimistic to expect that a private company would do its best to implement unprofitable expansion to the semi-urban or rural areas, beyond the commitment it signed for. Manila is somehow a counter-example.

A strong effective regulation is obviously necessary, not only to avoid monopolistic abuses, but also to monitor the policy that frames the service all along the life of the contract .

Where failures appear in tackling poverty issues, the cause may lie not in the objectives of the regulatory bodies but in a weakness of regulatory capacity. Many regulatory agencies in developing countries have been created in the last decade. They often lack experience, financial means and human resources to pursue effectively both economic efficiency and poverty objectives.

Jacobs (2004) surveyed regulatory bodies for utilities of 13 Asian countries. He assesses that regulatory offices are usually understaffed, while 80% have no access to training. He concludes: *"It is not surprising that Asian utility regulators have not won the confidence of investors. Asia's governments rely too much on under-equipped and unsupported independent regulators to carry out tasks that are beyond their capabilities."* (p. 4)

A regulatory authority needs to have the right information on what will be the distributional impact of a reform. As Parker et alii outlined, another area of deficiency seems to be statistical analysis. Without reliable data, regulators will find it difficult to regulate effectively. However, some substantial efforts have been made in this field, with the implementation of powerful benchmarking tools, like Seawun in South-East Asia or SNIS in Brazil.

The private operator is not supposed to oppose the social policy of the country, even if it is inadequate. Tariff concerns are key issues for reaching the poor, but they are not decided by the private partner.

Van den Berg (2006) points out the strategic error of awarding the concession to the lowest tariff bidder while retaining a high connection charge for the unserved.

¹⁵ See Prasad (2006) or Ouyahia (2006)

In Buenos Aires, the concession was awarded to the lowest tariff bidder, resulting in an immediate benefit to existing users. However, the connection fee remained high, as it included an “infrastructure charge” meant to finance not just the connection, but also the incremental cost of expanding the secondary water distribution and sewerage networks. Very high connection fees created difficulties in expanding services to the poor. Therefore, the contract had to be renegotiated to match with the coverage targets.

The same problem occurs in Morocco. At the moment, the private operator of Casablanca is claiming that it cannot realise a large coverage extension program in the periphery, because a backfiring law would oblige it to charge a dramatically high connection fee, that the targeted population is more than reluctant to pay. This situation is not specific to private-run water supply services. The same occurs in other Moroccan cities that remain covered by municipal *régies*.

If governments do not recognise the legality of dwellings in shantytowns, it can be difficult for the operator to achieve any project there, as shows the example of Abidjan.

Furthermore, the necessity to understand the needs of the poor, to identify the real barriers of access to adequate services and to tailor demand-driven solutions towards the peri-urban or rural areas, may not be considered as the sole responsibility of the lone private concessionaire. The local public authority and the regulator, as far as the two are distinct, are at least as much involved in the topic as the operator.

The World Bank today admits that privatisation is not a panacea. As Kessides (2005) writes, the policy of reform emphasising the private sector has been somehow oversold and misunderstood. The state of infrastructure delivery when it was mostly done by state-owned companies was often inefficient. The practice of under-pricing made them totally unable to finance expansion and also not able to rely on other sources to finance the expansion of infrastructure. Reforms were necessary. But there is no universal model.

Effective regulation is the most critical condition for reform to protect the interests of both private investors and consumers, especially the poor.

3. The very small private players

3.1. Before the public was the small private

The role of the private sector in water supply and sanitation is obviously not limited to big international groups who undertake large utility management. In places where no convenient collective solution through networks has still been implemented, a plethora of small, generally informal, independent suppliers are fulfilling the basic needs of the population: water carriers, fountains owners, etc. Some of these small providers are community-based, not for profit organisations. But the majority are small private vendors.

As water is a basic need for everybody, water vending is, or used to be, a traditional profession everywhere. It was, however, not before the late 1990s that small-scale providers began to gain international recognition as key players in the water and sanitation sector. Until then, they were considered a transitory and temporary phenomenon to be ignored rather than supported, as they ran counter to the monopoly service provision model, preferred and desired by the governments.

In Paris at the end of the eighteenth century, ten to twenty thousand water carriers were circulating in the streets of the French capital with 600,000 inhabitants. At that time, like today in Port-au-Prince (Haiti), the number of people involved in vending water could represent up to 5 % of the regular jobs.

All together, they used to supply an average of seven litres per day and per head. Prices could represent up to 10 % of the revenue for a worker family. The majority of the carriers were delivering by bucket, walking from one of the 58 existing fountains, or from the

riverside, to the households. Others were working with horse carts, transporting 800 to 1,000 litres. The profession formed an omnipresent feature of the day-to-day life of the city. The water carriers used to wear a sort of uniform, and generally came from the same region. Even if they were rather poor, their corporation was powerful. One of the reasons of the failure of the first water concession of Paris, in 1788, was due to the strong opposition of the water carriers, threatened by this new competition. During the nineteenth century, as the networks progressively spread over the whole city, the corporation shrank and disappeared.¹⁶

This reference to the History of a developed country is useful to understand why, in the spirit of many, the existence of small-scale water providers is synonymous to old fashion and underdevelopment. Water provision through SPWP in the present times sounded somehow insane; because in popular perception, it means the past, whereas network utility embodies the future. Until recently, the permanence of SPWPs in developing countries was perceived as a piece of evidence of underdevelopment, which would go away once the water utilities get to performing as they ought to.

This primary approach, nevertheless, remains questionable. Firstly, as seen above, it is unclear whether the scale economies of large utilities are strong enough to compensate their lack of flexibility to address the specific needs of certain layers of the population, including the poor peri-urban or rural dwellings, and certain kinds of consumption. As a matter of fact, poverty associated to irregular urban structure are considerably complicating the coverage issues through conventional networks. Owing to unsatisfied demand, small operators from the informal sector are emerging.

The remarkable recent resurrection of the water carrier business in the more advanced countries also needs to be stressed, even if it happens under a more sophisticated form, delivering potable water by gallon, and basically for the richest. The generalisation of networks managed by large utilities does not imply that SPWPs have no niche where they can be competitive.



But the overall question is more pragmatic. Even if it is considered that SPWPs will have no more value at long term, it can take several generations to transform the existing situation. In the meantime, small-scale providers are anyway playing the fundamental role, as the only available water suppliers for close to half the human beings on earth. It is worthwhile to better understand their market, and to see how they can participate in the urgent challenge of the Millennium Development Goals.

3.2. The re-emergence of SPWPs

It is today evaluated that small-scale providers serve about 25% of the urban population in Latin America and East Asia, and 50% of the urban population in Africa.

Even in cities where the public utility has a relatively high coverage, SPWPs serve a substantial percentage of urban households, not only in low-income and other areas where the municipal utility is slow to extend its network, but also in a wide variety of niche markets where they complement utility services.

The activity of small and informal water vending has both advantages and disadvantages to poor communities. On the negative side, the distribution of water by vendors is expensive. Households served by vendors pay generally higher charges for water than those directly

¹⁶ Dardenne, 2005

connected to a piped water system, and people connected to small networks pay more than those served by large utilities. Beyond cost considerations, small-scale water commerce makes quality control difficult. Vendors may get water from polluted sources or from contaminated containers. Moreover, it can be feared that cartels of independent vendors lead to “water mafias”, although this has been rarely observed, except in dramatic emergency situations during wars or after natural disasters.

Positive features of water vending are that it provides a valuable service to communities with no access to piped water. It provides a significant saving of time compared to fetching water from other sources. Another positive impact is linked to the labour-intensiveness and thus local job creation of the activity.

In any case, they represent a solution that enhances the competitiveness of the market. In low-income urban settlements, private and community-managed vending kiosks often compete with each other, and compete with, or complement, the poorly performing utility when the latter exists.

Small-scale providers come in many shapes and sizes. They range from independent borehole-fed networks serving as many as 25,000 households in Manila to walking water carriers delivering buckets. Many have been around for several decades, and some are also active in other value-added water businesses (water bottles or bags, filtered water, flavoured waters and ice, etc.).

Their clientele is not limited to poor and irregular neighbourhoods. On the contrary, a substantial part of the revenue is realised with middle or even upper class homes, recently built in areas which are not still served by the network, as observed in Nairobi.¹⁷

Since the beginning of the new millennium, several surveys have been published on the SPWPs in developing countries. Three milestone papers have surveyed the current situation in Africa, Latin America and Asia.

- Collignon and Vézina (2000) performed a comprehensive analysis of the situation in ten countries of Sub-Saharan Africa.¹⁸ They figured out the considerable economic weight of small private operators in peri-urban areas, which contain between 30 to 60 % of the total urban population.
- Solo (2003) studied six countries in Latin America.¹⁹ He concluded, suggesting that small enterprise could and should be a part of the solution, and that government policies ought to promote instead of hinder the scale and quality of their offer.
- Conan (2003) did a similar job for ADB, reviewing the situation in eight Asian cities.²⁰ In Asia as well as in Africa or Latin America, the presence of small private providers is significant where connection rates is low or where utility service is weak. SPWPs deliver water to 6 % of the population in Delhi, 10 % in Dhaka, 5 % in Kathmandu, 36 % in Cebu, 19% in Ho Chi Minh City, 44% in Jakarta and 13% in Ulan Bator. In a city like Jakarta with a population of 9 million, this means that approximately 4 million people depend on SPWPs to meet their daily water needs, despite the fact that small private providers were not considered in the strategies to increase the water supply coverage in the Indonesian capital. The majority of these SPWPs remain informal and work without recognition from the local authorities or the water utility.

¹⁷ Collignon and Vézina, 2000, p.18

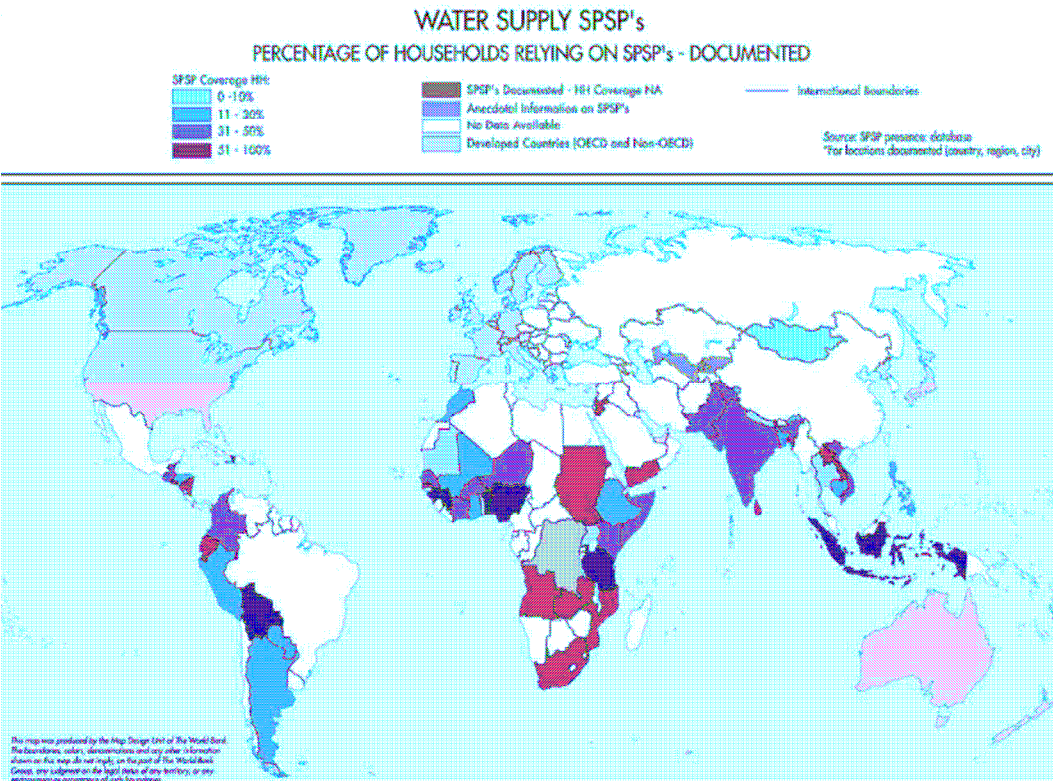
¹⁸ Mauritania, Senegal, Guinea, Mali, Burkina Faso, Ivory Coast, Benin, Uganda, Kenya, Tanzania

¹⁹ Argentina, Paraguay, Bolivia, Peru, Colombia, Guatemala

²⁰ Cebu and Delhi (India), Ho Chi Minh City (Vietnam), Jakarta (Indonesia), Kathmandu (Nepal), Shanghai (China), Ulan Bator (Mongolia)

More recently, among a growing number of case studies, other relevant studies are contributing to a better understanding of the SPWP market and the supporting policies they could deserve:

- Kariuki and Schwartz (2005) made an important contribution to the general understanding of SPSP, both in water and electricity delivery. They reviewed over 400 documents covering analysis in 44 countries (49 including electricity), where around 10,000 small private water providers were identified. Roughly half of the cited occurrences are in cities, and the other half in rural areas. They found strong indications of a sensible increase of SPWP activities over the last decade, stressing on the importance of their offer to basic service provision to the poor. They also observed that no literature was found for Eastern Europe and Central Asia, and very few documents from the Middle East and North Africa. It is unclear whether the lack of literature in these regions is due to lack of importance of SPWPs or the result of low priority accorded by sector practitioners.



Source : Kariuki and Schwartz (2005)

- Triché, Requena and Mukami (2006) did a comparative study, cross-mapping information from World Bank supported SPWP programs in five countries.²¹ They noticed how varied are the profiles of the local private firms, despite sharing a common challenge, reflecting the different cultures and economic development stages, as well as depending on the contract models that have been devised. They also analysed the preliminary results of some pioneering projects aiming at structuring and strengthening the SPWP offer.

3.3. Typology of the small private water suppliers

Kariuki and Schwartz (2005) pointed out the necessity to clearly define and categorise SPWPs.

²¹ Cambodia, Colombia, Paraguay, Philippines, Uganda

First of all, they observed that the concept of “private” distinguishes SPWPs from other small-scale providers, which are non-profit organisations, either NGOs or community-based associations. SPWPs result from the initiative of a private entrepreneur, with a significant share of capital financing coming from private sources, and they sell water on a commercial basis.

Then, they classified SPWPs along two main axes:

- Do they manage their own source of raw water, or do they purchase water to distribute ?
- What kind of service do they provide ?
 - Managing piped networks (from 5 to 500 connections), managing points of sale (kiosks or standpipes), or delivering water to the client through non-fixed channels (mobile distributors)

Finally, they add a third axe to be considered:

- How formal / informal are they ? (regulatory issues)

3.3.1. Piped network operators

Small independent networks can be autonomous (with their own water source, usually boreholes), or secondary. In the latter case, they complement the main network of the utility company, from whom the bulk water is purchased.

Smaller networks (5 to 50 connections) are typically owned by an individual who may have started as a private borehole owner, or a utility customer reseller, gradually connecting the neighbours. Larger systems are owned by small private firms or user associations established expressly for the purpose of developing a network for members' use (20 to 500 connections).

Total establishment costs range from US\$ 100 to 300 per connection, depending upon ease of access to raw water, degree of competition from other network providers and other sources of water, dispersion of households being targeted, cost of capital and pumping and storage investment needs. These costs may be recovered through upfront connection charges, connection costs spread out over an agreed payment period or may be folded into tariffs.

According to Kariuki and Schwartz (2005), prices offered by private piped networks are on an average 1.5 times those of public utilities. Notwithstanding the very large range of unit price, comparing 93 cases in 47 countries (US\$ 0.17 to 0.86/m³), it is notably parallel to those of formal utilities (US\$ 0,02 to 0.79/m³).

Photo 6 – Paying water kiosk in Lomé (Togo)

3.3.2. Standpipe managers

Standpipes are a long-standing delivery mechanism in many Sub-Saharan African countries. Until the 1980s, public fountains dispensing “free” water without on-site dedicated staff were a common way of supplying low-income households. Conflicting issues were frequent about who would have to pay for this water. Some independent utilities used to bill local governments, but the municipalities were often facing difficulties to pay to the operator. In many public utilities, held by municipal water departments, neither the state nor the user was invoiced for the water consumed. Over time, the inability to recover costs resulted in growing utility



deficits and eventually to the decline of free public standpipes as a key component of delivery to low-income households. This scheme is progressively abandoned in urban areas, instead it remains present in rural neighbourhoods.

In the 1990s, payment for water at standpipes became more common. The free standpipes shifted to paying water points or kiosks. Some utilities implemented and managed a network of standpipes under their own administration. However, this management scheme is not cost-effective, as far as the employee in charge of the service has no personal incentive on the turnover. Utilities are becoming increasingly aware of the need to ensure that standpipe managers have a commercial outlook that promotes efficiency and cost-recovery. The general trend today is to develop delegated management. Several utilities are now leasing their installations to private operators and selling them bulk water.

Standpipe private manager is a rather recent profession. As resellers, they usually purchase bulk water at a low price (generally close to the social tariff), between US\$ 0,4 and 0,6 /m³ in most cases. Following Collignon and Vézina (2000), they resell water with 30 to 90 % gross margin. The final customer pays between US\$ 0,50 /m³, in the best organised schemes, like in Ouagadougou, and US\$ 2,50 /m³, in the worst organised places (Nairobi or Cotonou)

3.3.3. Customer resellers

In this case, an “official” client of the utility uses his connection not only for his own needs, but also to sell water to the neighbours who are not connected.

Group taps are the simpler form. Close households jointly share one private connection and share the bill.

A step forward, customers of the utility install a tap outside their house, and use it as an informal standpipe. One member of the family stays around to control the tap and to charge the sold buckets.

In the more sophisticated cases, customers build a tank and install a battery of small plastic piping connecting up to hundreds of households. Generally, every individual piping is equipped with a secondary meter. In this instance, the resellers can be classified as small network operators.

Despite the fact that resale is formally forbidden in numerous places, it is usually tolerated. Anyhow, as tariffs are steeply rising as monthly volume increases, the resellers are penalised, as well as the low-income families who are their customers.

In Ivory Coast, the private utility operator, Sodeci, encourages declaration by the resellers. A specific



Photo 7 - Customer reselling water in front of his residence in Lomé (Togo)



Photo 8 – informal water reseller in the outskirts of Maputo (Mozambique)

contract form is available for “commercial customers”, allowed to sell to the neighbourhood. Hundreds of customers have such a kind of licence to complete the coverage of the service. Nevertheless, they have no advantage in terms of tariff, and need to pay the resold water at expensive prices.

3.3.4. Water carriers

Mobile operators offer higher-cost, low-volume service but can do so in higher-risk environments, wherever someone is willing to buy water, and even if this demand is only seasonal.

Non-motorised carriers can be classified, depending of the means they use to transport water to their customers’ homes. The price of water delivered to the house is high. It ranges between 2 and 8 US\$/m³, according to Collignon and Vézina (2000). Nevertheless, this pricing just reflects the cost, due to the usually high competition which exists in this market.

- Street carriers, who carry buckets by hand, as in the example of Paris two centuries ago, are relatively rare nowadays, except in catastrophic situations due to war or natural disaster.

Nevertheless, Verdeil (1995) investigated the water supply in Haitian slums of Port-au-Prince, where 10 % of the population purchase water from street carriers. The number of bucket sellers was estimated at 2,000, for a surveyed low-income area of 100,000 inhabitants. In Haitian peri-urban slums, street carriers are mostly women, recently immigrated from the countryside. They buy water from a private tank owner, a utility subscriber reseller, or sometimes can get it for free from a leakage. They deliver between ten to twenty 18-liter buckets per day, at an average price of US\$ 7/m³ (12 times the tariff of the water utility)

- Hand carters, transporting 100 to 200 litres, are particularly common in Ouagadougou and Conakry.

In Burkina Faso, the public utility distributes one third of the water volume through standpipes. In peri-urban areas, Collignon and Vézina (2000) noted a trend towards generalisation of water carriers, downstream the standpipe, delivering to the consumers. This trend is not observed in the rural standpipes, where households are basically using their own labour force (women and children) to carry the buckets from the water point.

- Donkey or horse carters can use barrels up to 500 litres, as observed in Nouakchott or Dakar.

3.3.5. Water truckers

Water truckers are present everywhere. They constitute a systematic alternative offer in all the places where the utility’s level of service is poor, with long shortage periods and many unserved areas.

To have a water tanker truck, even a second-hand one, means a major investment, and high operating costs. However, the activity can be very lucrative, and not solely dedicated to poor homeowners.

3.4. SPWPs and community-based operations

Among the diverse forms of small-scale provision, the private sector is in some ways competing with community-based solutions. Although the frontier between both concepts is not always easy to define, the main difference is that the community-based (or NGO driven) systems are not focusing on a direct monetary profit, and can often mobilise voluntary labour.

Especially for small and informal organisations, it can be difficult to distinguish clearly between private and civil society schemes, given the range of institutional forms that exist. Also, civil-society organizations often help to set up small water and sanitation operations, whose day-to-day operation will be later run by some members of the neighbourhood, sharing the small business profit, if any, with the community. Alternatively, civil-society organizations may take on a role similar to that of a public-sector regulator, negotiating with and “contracting” small private operators, whom they may have helped to set up.

Another specific case is cooperatives, as those existing in Bolivia, Mexico or Vietnam. Under the same institutional framework, cooperatives can adapt a large range of behaviour, from pure private-minded management to pure philanthropic user clubs.

Community-based systems have received the most attention from donors, either institutional or NGOs, particularly in rural areas of remote regions. They can be very effective, especially for very small-scale supplies, but their limits should be noted:

- Social willingness is not always synonymous to technical experience and long-term vision. Village or neighbourhood water committees tend to manage their water supplies at the least immediate cost. They do not try to optimise their functioning, for example by extending systems to sell more water and reach economies of scale. On the contrary, their approach is generally to minimise expenditure, frequently even at the expense of preventive maintenance.
- The actual management is often monopolised in the hands of a small group that may not be representative of all the users. Even if the idea is beautiful in theory, transparency and basic governance rules are not always confirmed by the observers on the field.
- Tariff recovery is not an easy task for a community-based organisation, where the managers are too close to the beneficiaries to pretend to keep a clear provider-customer relationship.
- Free voluntarism or minimal salaries are conceivable for short-term actions, like self-construction projects aiming at building up the equipment. These means of reducing costs are not adequate for a permanent job, like a standpipe operation.
- Last but not least, one of the major obstacles to such community-based providers is the lack of access to institutional finance. Most communities have no legal status to apply for a loan, or no sufficient track record to give confidence to the banks.

Beyond these limitations, community-based operation requires a pre-existing social cohesion, which is more likely to be found in rural societies than in peri-urban slums.

Following the success of rural water committees, NGOs and donors have tried to introduce rural community water supply management models in urban projects where some form of neighbourhood organisation could be envisaged. The participation of community members is voluntary, often initiated during the planning and implementation phases.

While this approach has had some success, it is constrained by the particularities of the urban context. Urban communities are heterogeneous and less unified than rural societies and households. They are generally more dependent on cash. Urban households must spend their time on income earning activities and there is a higher opportunity cost of their working on unpaid community initiatives.

Therefore, community participation is frequently successful in short term inputs (participatory planning and implementation), but is less successful and unlikely to be sustainable for long-term operation, particularly in peri-urban areas. It is likely that mechanisms will need to be established to adapt the management model from a voluntary to a commercial one as soon as the project has been implemented.

3.5. Review of some case studies

As Solo (2003) points out, the most striking findings of any SPWP review is the sheer diversity of the services, market niches and business models developed by the small water entrepreneurs.

In the following paragraphs, a few cases have been picked up, in order to illustrate some remarkable situations, and to highlight the outstanding capacity of adaptation of the small private providers to any kind of social and economic environment.

3.5.1. Paraguay

A 1998 survey carried out in Asunción and Ciudad del Este, Paraguay, found that one third of all water connections, serving up to half a million people, had been made by small informal water providers over the twenty-year period preceding the study. These connections were supplied by 350 to 600 independent *aguateros*, who invested an average of US\$ 250 per household to offer water at a price consistently below the charges levied by the public water company, despite the subsidies the latter receives.

The typical *aguatero* is a small entrepreneur who organises a water supply system, investing his own money or borrowing funds from commercial banks to drill a well and set up the distribution network. He has usually a registered firm, and pays taxes as any commercial undertaking.

The market emerged as the public water company was unable to deliver drinking water in the growing low-income settlements of Asunción. Water carriers and truckers figured ways to lay cheap but reliable piping, and took advantage of new well drilling technologies.

Investments made for drilling wells, establishing the distribution network, as well as other necessary equipments are recouped through connections charges levied on end-users. Taking into account that their typical customer is a low-income family, the *aguateros* allow their clients to stretch out the connection fee over a period, charging market rates of interest. Monthly tariff charges are collected by each individual entrepreneur. According to Solo (2003), total payments for a family connected to an independent small water provider would be around 8% of minimum wages during the early period when families have to pay back the connection fee and would drop to only 3% when payments are limited to the operation tariff.

Water quality is good and, in most places, available 24 hours a day. According to the sanitary laws, the *aguateros* are subject to water quality certifications every six months.

In spite of efforts realised by Corposana, the state owned company to expand the “official” water network to low income neighbourhoods, the *aguatero* system is expanding and seems to be highly appreciated by low-income families.

The *aguateros* estimate that they have installed some 50,000 connections in Asunción over the past fifteen years for an investment of around US\$ 20 million in over 400 small-scale systems. In contrast, Corposana invested US\$ 137 million to reach 62,000 new connections in the same timeframe.

Until recently, the government was opposed to the *aguateros*, who created an association to protect their interest, strengthen their public image, and prevent attempts to drive them out of business.

Consequently, private provision of water services has been legalized a few years ago, making possible for *aguateros* to operate within a formal context. Furthermore, the government is encouraging them to form joint ventures with construction companies, in order to build and operate new water supply systems in marginal communities, through access to a program financed by the World Bank.

The private company builds the system under a construction contract with the National Service for Environmental Sanitation (SENASA), and operates the services under an

operational contract with the local users association. A third contract, between SENASA and the users association closes the triangle, outlining the respective responsibilities in supervising the investment. The constructor is paid for part of the construction costs by a down payment provided by SENASA. The rest is paid as soon as a predetermined number of connections have been implemented. The operator is expected to make its profit on the margin of the operation (tariff and connection fees to the customer). The managerial control over the operation is supposed to have a ten-year duration, possibly renewable for five additional years. From 2002 to 2005, six contracts covering ten peri-urban and rural communities were awarded. They covered a total population of 28,000 people. (Triché et al., 2006)

3.5.2. Cambodia

In Cambodia, where the access to safe water is around 25 % for the small towns and rural areas, the lack of sector regulation has, to some extent, provided an enabling environment for the development of thousands of small and informal water supply enterprises.

While it is difficult to estimate accurately the total annual investment by these enterprises or by end users, it is likely that the investment generated in the rural water sector through these initiatives far exceeds public investment.²²

The number of private suppliers is expanding. They range from individual water vendors to family-run pump-and-pipe operators, or even to larger enterprises supplying entire villages. As water is abundant and close in most parts of the country, the cost of entry into this market is low, while the usual concerns about the monopolistic character of the water distribution are not really an issue. One of the characteristics of rural households in Southern Vietnam and Cambodia is their reliance on more than one source of water. For example, even where small piped systems are in operation, most consumers also harvest rainwater, and keep an individual well.

The Government of Cambodia is now aiming at expanding water and sanitation services to low income households in secondary towns, through support to small-scale private operators.

DBO (Design, Build and Operate) and DBL (Design Build and Lease) programmes have been initiated, funded by the World Bank. Following Triché et al. (2006), four DBO contracts have been awarded in 2005, and two more were at selection stage, totalling approximately 13,300 connections to be realised, for a total population of 66,000 inhabitants in six small towns. For DBL contracts, the target population is located in twelve towns totalling 67,000 people, where 13,400 connections should be realised.

Globally, the participation of government subsidies in the total investment cost ranges from 50 to 90 %, while the remaining 10 to 50 % is financed by the entrepreneur.

3.5.3. Vietnam

In the Mekong Delta Region, the private sector is very active. In Tien Giang province, non-state water companies are already serving about 65 % of the 1.6 million inhabitants, accounting for more than 60% of the total investment in rural water in the province.²³ This includes private investors (17 %), cooperatives (10 %), and user groups that have raised capital themselves (34 %).

²² WSP (2004). A small independent network supplying water from a borehole to 20 to 60 households may require between US\$ 1,000 to 8,000 of initial capital.

²³ WSP (2004), p.5

Since the early 1990s, small private investors have thus constructed a number of small piped systems, usually fed by a borehole. They used to charge an up-front connection fee of US\$ 80-100, as also do non-profit cooperatives. Since 1998, the private investors of Tien Giang are not anymore allowed to charge the consumers for initial investment (while user groups and cooperative can continue to do it).

In Ho Chi Minh City, the municipal water utility was not able to reach alone the target of the Master Plan 2001-2005, which forecasted an increase from 55 % to 90 % of the water coverage of the 5 million inhabitants. Therefore, the Municipality decided in December 2001 to develop a legal framework in order to promote the involvement of small scale water providers. The objective was to encourage private investment and to promote partnership between the water utility and local operators. The water utility must support the small entrepreneurs both on technical and administrative aspects and on procurement of materials. The small-scale operators benefit from the policy of tax exempted investments.



Photo 9 – Small network piping crossing over the road (Southern Vietnam)

It is estimated that 47 % of the households of Ho Chi Minh City are directly supplied by WSC, the public utility, 34 % have access to wells, and 19 % are customers of a large number of SPWPs.

Most of these are resellers, serving three to five neighbours from their WSC connection. The average quantity of water bought by the

reseller's customers is around half the average consumption of utility customers (17.5 m³/month compared

with 36 m³/month). The water tariff paid to the resellers is between US\$ 0.13 and 0.50, averaging US\$ 0.25/m³. This is slightly more than twice the utility's social tariff of US\$ 0.11/m³.²⁴

3.5.4. Uganda

Uganda is a pioneering country in integrating SPWP in the heart of the development of a national policy for the sector. Local private sector providers have been operating water supply systems in many small towns in Uganda over the past few years through management contracts. These operators have brought recognised efficiency gains to the sector.

For the 60 small towns of the country, the responsibility for service delivery is attributed to the respective local authorities. These are required to enter into a management contract with a private operator for service delivery. The SPWP is responsible for day-to-day management of the facilities. He charges and collects revenue, manages routine and urgent repairs, and undertakes minor system extensions. The local water authority is in charge of controlling the operator, as well as renewing and extending the assets. The private operator remuneration consists of a series of fees, in a combination of fixed costs recovery, output-based fees, and incentive bonuses.

Both local water authority and private provider operate a joint escrow account for the service related revenue and expenditures.

Over 50 small towns, totalling around 600,000 inhabitants, are currently working under this scheme, with many of the private operators operating five to six towns at once, which

²⁴ Conan, 2003

facilitates clustering and cross subsidisation of smaller uneconomical towns. A 2004 AfDB report highlights the excellent results. Most of the towns are able to meet their O&M costs, including the remuneration of the operator, with water losses often reduced to less than 10 %. Investment capacity comes from the central government, which has obtained international financing from many donors.

The first contracts came into effect in July 2001. The government's target for private connections in the mid-sized towns is to increase from 1,400 in 2002 to 17,100 before 2010. At that time, the volume of water distributed should reach 3.8 million m³.

A WSP field note²⁵ gives the example of Kalebu Ltd, which has the contract to supply water to five towns with a total population of 40,000. Private connections varied from 170 to 250 per town. The systems function independent of each other, with a team of about six employees per centre. The accounting methods and procedures are identical. The technical results are encouraging, with a billing rate that has reached 98% and a recovery rate in the order of 90% of the due amounts.

Triche et al. (2006) notes that ten contracts have been awarded between 2001 and 2003, involving a total population of 173,000 people. The investment program promoting the local management contracts at the national level has been considered as successful and was re-funded in 2004.



Photo 10 – Token fountain in Uganda

The government encouraged the formation of an Association of the Private Water Operators in Uganda (APWO-Uganda), whose creation in 2004 was helped by a GTZ grant. The association publishes a newsletter, *the Operator*, organises workshops and training sessions, works on standard of services improvement, battles for recognition and support from the public or the government and promotes access to international cooperation.

In 2005, the association submitted a grant application to the Water Facility of the European Union.

Since 2006, APWO-Uganda is member of AquaFed, the International Federation of Private Water Operators.

3.5.5. Mauritania

In Mauritania, all the small towns of the country (excepting the 12 main cities, run by Sonelec, the public national utility), are supplied by networks managed by young private entrepreneurs. All together, they realised during the last four years as many kilometres of network and connections than Sonelec.

In 1995, the government of Mauritania wanted to prioritise the employment of young graduates. This gave an opportunity for the Directorate of Water to replace the existing water service operators by new ones. These young graduates were chosen primarily for their level of education, each one of them becoming the concessionary in his area of origin.

Through this action, 250 pumped water supply schemes progressively came under private management. These SPWPs benefit from strong social legitimacy and operate like commercial micro-enterprises.

²⁵ WSP (2002), p.5

The formal agreements are simple management contracts for one year, renewable at the discretion of the government. Nevertheless, less than 10% of the contracts were terminated after one year, and the actual average duration is four to five years. Some of the operators finance, from their own funds, major repairs and renewals. Extensions of the systems are generally financed either by the individual households or by the local government.

3.6. Too small and too informal to be efficient ?

Small informal providers are often accused of being expensive and offering water of dubious quality. Nevertheless, their omnipresence demonstrates their success, addressing households neglected by the larger utility companies. They fill in a wide-open gap between two other solutions which are commonly more “politically correct” : the monopolistic large official operator and the community organisations based on voluntary work and non-profit making objectives.

Three elements must be taken into consideration:

- They are small. How their size can affect the performance has to be linked with the general question about the economics of scale to be expected in the water delivery industry.
- They are informal, which means also unregulated. Is it convenient to leave such a basic service, with such impact on the environment, the health and the global wealth of the population, uncontrolled ?
- They use different technologies. It is obvious that in a lot of places, piped water would be less costly than trucked water deliveries.

These three points affect greatly the price and the quality of the service provided. But they are not directly related to the fact that SPWPs are private.

3.6.1. Pricing issues

The city of Onitsha (Nigeria) concentrates 700,000 people. Only some 8,000 households are connected to the public water supply system. The vast majority of the population obtains its water from the small private vending systems.

Ray and Kakebeeke (1998) studied the case. They showed that the poorest households were paying most for water "*both in absolute amounts and in terms of the percentage of their income spent on water*". The lowest income groups of households are spending 18 % of their income for water during the dry season, while the upper-income class is spending less than 3 %. Furthermore, by paying a total annual amount of US\$ 7 million to water vendors, the Onitsha population was "*already paying the water vendors over twice the operation and maintenance costs of a completed piped distribution system, and 70 % of the total annual costs.*"²⁶

In other African cities also, the differentials in the effective cost of water, related to the prices charged by the public utility, can be very high indeed. Numbers cited in academic studies frequently vary between 4:1 and 10:1.

In many cases, households pay over 10 percent of their monthly incomes for vended water, when they would just pay between 1 and 5 % if they would have access to piped water at the social tariff. As often said, “it is expensive to be poor !”.

The popular cliché is that private providers charge a huge multiple of the public utility’s price. Nevertheless, the existing surveys and analyses invite to modulate such a general feeling.

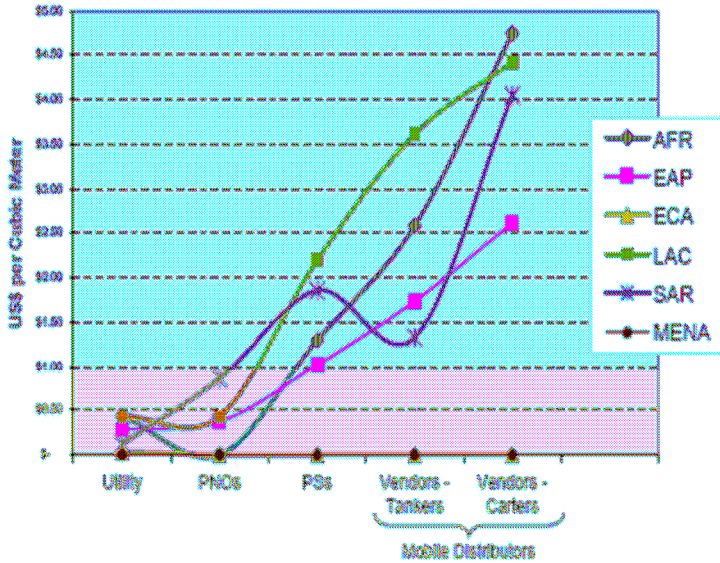
²⁶ Ray and Kakebeeke (1998)

First of all, the social tariff of the main utility cannot be used as a reference price, as far as it does not reflect the effective cost. If the utility's price is supposed to be subsidised, or at least cross-subsidised for the lower consumption levels and the more remote places, there is no reason to expect that an alternative solution would be able to match on price for the particular segment of the low-income outskirts.

Kariuki and Schwartz (2005) compared observed unit prices based on data collected in 93 locations over 47 countries.

There is no doubt about the technological constraint. Hand carried water is more expensive than trucked, and trucked water is more expensive than piped, especially when prices are compared per volume unit.

Chart 3: Average Price of Different Service Provider Based on Regions



From Kariuki and Schwartz (2005), p.27

PNOs : small private network operators
 PSs : Point sources (standpipes or kiosks)
 AFR: Africa
 EAP: East Asia and Pacific
 ECA: Europe and Central Asia
 LAC: Latin America and Caribbean
 SAR: South Asia
 MENA: Middle East and North Africa

But the big bias of such a comparison is due to the indicator which is used, pricing per m³, although the quantities are different. In any industry, wholesale or bulk prices are significantly lower than retail prices. It is technically and financially absurd to supply through street carriers an upper-class household consuming one cubic meter per day. It would mean fifty daily trips , transporting two 10-liter buckets each time. At the other extreme, to invest in a piping extension to reach a house which will purchase no more than 40 litres per day is also questionable, in pure economic terms.

Small private independent providers are sometimes criticised by public authorities or NGOs for reaping high profits on the backs of their low-income customers. The existing surveys are generally finding the opposite. Collignon and Vézina (2000) demonstrated that the intense competition is generally keeping profit margins at a very low level. They estimated the net earnings of the water delivery small businesses in Africa:

- US\$ 2-3 a day for carters in Nouakchott, Bamako, or Ouagadougou
- US\$ 3-4 a day for standpipe operators in Dakar, Bamako, Conakry or Abidjan

In the case of a standpipe operator, this is not incompatible with the fact that gross margins may be rather high. If he sells 40 litres to a hundred households every day, and if he charges the equivalent of US\$ 1,00 /m³ while he purchases the bulk water for US\$ 0,50 /m³ from the utility, his gross margin will be 100 %. Yet he will hardly earn US\$ 2 for a full day of work.

Moreover, the cost of water delivered to the home is higher than bought at the standpipe. US\$ 8 to 10 /m³ may seem exorbitant, but it just reflects the cost, considering a minimal wage of US\$ 1 or 2 for a day's long hard labour. Nobody ever became rich carrying water along the streets. The high price of such a modest service has nothing to do with the fact that the carriers are private, and, therefore, exploiting the poor for profit.

However, for a comparable service, prices of small network operators compete favourably on price, in several cities, with the main utility.

3.6.2. Water quality issues

The small informal water providers are also accused of offering water with a very uncertain quality. As they generally take the water from an existing network, quality is not significantly worse than the one they find from the pipe.

The formal sector tends to look down on the small private operators as incompetent, yet the move towards formal economy does not necessarily improve the quality of service, even if it leads to increased costs and less responsiveness.

In general, the conclusion is that the quality or service and price offered by SPWPs is strongly linked to the water and service provided by the utilities. The better the service coverage and the water availability from the public utility, the smaller is the niche market for SPWPs.

Small private operators grow up in the chinks and cracks remaining in the public service, by satisfying the fragmented demand of low-income groups in disadvantaged neighbourhoods. Their weight is inversely proportional to the concessionaire's efficiency.

Through the available surveys, it is not established that small private providers, when they reach sufficient size to handle small networks would show worse performance indicators than municipal utilities in terms of operating ratios, non revenue water, or employees per connection. On the contrary, they give evidence of competitive advantage in recovery rates, probably due to their better "customer care" service and higher flexibility to deal with late payers.

3.6.3. Regulation issues

The informal character of most SPWPs remains a concern.

Although they are sometimes recognised by the local authorities, they rarely have an authorisation from the existing water utility. This increases the risk of their investment. In addition, their business is seen by commercial banks as illegal or at least risky, and their assets are hardly recognised. Consequently, they have limited access to long term credit and borrow at high interest rates. The cost of doing business under these conditions is transferred to the consumer.

The legal situation of SPWPs varies from one country to another. In Argentina and Paraguay, for example, the law is ambiguous with respect to the status of independent water providers, while the small private participation in water supply is clearly encouraged by the Colombian and Peruvian laws.

The second impact of the informal status is related to the lack of regulation. The less the SPWPs are recognized by the national authorities, the more informal they remain, and the higher the difficulty in regulating them .

The regulatory frameworks dealing with water production and distribution were conceived for large monopoly providers, whether public utilities or private concessions. With the exception of the cooperatives, which are regulated to protect shareholders, none of the countries studied has a regulatory framework that acknowledges the existence of, much less encourages, independent providers in the water sector. *“In the Latin American context, where municipal utilities enjoy official mandates and recognition, the independent providers are left in a kind of limbo: neither completely legal, nor explicitly illegal.”* (Solo, 2003)

4. Building up a mid-sized private offer

4.1. Advocating for the emergence of a mid scale private sector

Somehow, the two preceding chapters are leading to the conclusion that the large private players are too big, while the small ones are too small. It seems that the market is expecting a mid-size offer, better calibrated to address the challenging issues, in particular towards the low-income areas. However, this mid-sized proposal from the private sector does not exist, for the time being, at least at a consistent level.

Except in a handful of advanced countries, like in France or Spain, the private sector participation in WS&S operation is rather new.²⁷ In the majority of the countries, developed or not, the public authorities did not even imagine that they could delegate the service to a private player up to the early 1990s. No demand, no offer!

When the market suddenly opened, it was intended to address the biggest and more problematic cities of the world before testing the concept, and adapting it to local conditions, on more reasonable “laboratories”. The conception of the “invisible hand” of the market and of the perception of what the private companies are able to do, is sometimes illusory, particularly in the mind of professionals who never had the opportunity to work in a private company.

The idea that it would take some time before an effective private offer could appear has not been considered. Neither the necessity to promote the set up of a new national private sector before launching bids. Only the few companies that have a sufficiently large background in their home country to consider the challenging adventures overseas were able to demonstrate the required experience.

Spontaneous generation of private industry occurs, but it takes time; especially if the purpose is to establish a set of mid-size companies dedicated to a new market. They arise in three ways:

- Spin-off of large multinational water operators. This trend is appearing in some countries, like in South Africa or Colombia, where former subsidiaries of multinational groups, which “gave up”, have been recently revamped by smaller entrepreneurs.
- Diversification of national companies whose core business was different, usually civil works or consulting engineering. After some first experiences, sometimes rather frustrating, they are progressively gaining experience and capacity to tailor innovative proposals adapted to their local environment, as for example in Brazil.
- Roll-up of smaller enterprises, which have been successful in their first phase of too small and rather informal life, like in the Ugandan case.

²⁷ Better said, it existed at the pioneering times, as most of the water supply networks have been initiated by private initiative, but completely disappeared for a long time.

The primary motive for engaging local private companies in small towns, rural or peri-urban water supply systems, is to promote the sustainability of the services. Local firms are more likely to understand the local context and needs, have lower costs, and are more interested in small contracts.

Nevertheless, the capacity of the local entrepreneurs to finance long-term investment is essential, at least to cover rehabilitation or replacement commitments, even if the main part of the investment needs has been provided from another source, for example ODA loans or grants channelled by the national government.

The “public service” face of the water supply and sewerage activity is not compatible with the informal and volatile character of small actors. Because informality avoids regulation, while volatility hinders long-term vision.

Medium-sized local companies would seem to have many of the advantages that advocates for private-sector participation, without many of the disadvantages that opponents criticise. Given sufficient experience, there is, in principle, no reason why local companies should not be able to compete with multinationals even for the large contracts, but also for smaller contracts that might not be of interest to the multinationals. These local companies could help to create the market competition that many economists consider as an essential ingredient of PSP.

The water and sanitation services dedicated to the poor are unlikely to attract the attention of the kind of international market entrants that were the large concessionaires of the ‘90s. More likely is the development of medium scale service providers on national basis.

As efforts to municipalise service delivery responsibility gain momentum, the size of the operation perimeters is shifting. Decentralisation and local politics make it more difficult to aggregate services through national public utilities. In certain cases decentralisation causes excessive fragmentation.

Private participation is a natural response to decentralisation. If the local perimeter is too small, the lack of economy of scale limits the performance of the operator, except if this latter can manage different places at the same time. Of course, a public company set up at a larger level, regional or national, could provide the service to several small municipalities which are contracting it. Nevertheless, this means a political interference of a national or regional level within the municipal affairs. The Brazilian scheme of the CESBs (Basic Sanitation State Companies) set-up during the military regimes, hardly survives once the country went back to democracy. If the new constitution gives the responsibility of their water service to the municipalities, why would they stand a public operator which reports to another administrative authority?. But do they always have the size to manage their own entity ? Will they have the competence to embrace the appropriate issues regarding their low-income population ?

The fact that France has been the most pioneering country of the world for PSP in the water supply services is closely linked to the fact that the country accounts for more than 36,000 *communes*. This astonishing number is to be compared with the 433 *counties* of the United Kingdom, or the 278 *municípios* of Portugal. Since the nineteenth century, the French national power decided to fully decentralize the water supply concerns (as well as the solid waste) to the municipal level. During decades, the *communes* did not even have access to the financial instruments, like the *Caisses d'Épargne*, which were draining the popular savings towards the central government. The natural issue was to deal with private entrepreneurs, whose size progressively inflated, due to an (over)concentration process that little by little shaped the market the way it is today. The third group of the French water industry, SAUR, is today big enough to operate overseas large cities like Abidjan or Gdansk, but it took off in the 1950s, as a small company focusing on rural areas.²⁸

Some countries are effectively encouraging the emergence of more local operators.

²⁸

The last letter of SAUR stands for Rural

The Colombian water legislation, improved after the last Constitution of 1991, remains a pioneer initiative. Small private participation in public service provision is encouraged. A Permanent Regulatory Commission registers and monitors “public service enterprises” as soon as some basic requirements are met:

- To demonstrate a roster of employees with professional qualifications;
- To present to the Regulatory Commission an annual business development plan indicating goals and means for achieving them;
- To organise and support a customers’ association that elects a permanent representative to the board of directors;
- To have an accounting department which employs at least one full-time professional accountant .

Where the legal and institutional environment is favourable, like in Colombia, a growing number of small local firms can develop and, in recent years, takeover the operations of municipal water assets in small towns or semi-rural areas. In the Atlantic coastal region, one of the poorest of the country, the process is supported by a World Bank programme. According to Triché et al. (2006), ten contracts were awarded during 2001-2005, serving 1.2 million people in 20 urban centres. The smallest towns involved in the programme have population slightly over 10,000 inhabitants. Most of these new operators have lease or service contracts granted by the local governments, and their water rates are regulated. They will probably have more capacity to address the needs of the low-income customers, either in peri-urban slums or remote rural townlets, than the French or Spanish groups which first intervened in the national PSP process.

4.2. Recognizing and supporting the small providers

In contrast to the small-scale community-based providers, small-scale private players have only recently gained acceptability as a conceivable alternative for developing and managing supply services in peri-urban or rural neighbourhoods.

As a result, SPWPs are still often viewed as temporary rent-seekers proposing a poor quality service at an excessive price.

Nevertheless, an increasing number of practitioners acknowledge the potential role of SPWPs in developing and managing private water supply systems and in advancing local private sector development. This new recognition has probably been helped by the announcement of the Millennium Development Goals, that urged the international water community to become more pragmatic and to reach effective results before 2015.

The first recognition is that many low-income dwellings will remain unserved, if not by SPWPs. Working with these small providers in order to improve their quality, efficiency and affordability, and to leverage their capacity to expand service coverage is a cost-effective weapon to fulfil the gap between the MDGs and the real capacity to enhance the conventional utilities in such a short time.

As Kariuki and Schwarz added, leveraging the SPWPs will be of more benefit to consumers than continuing to ignore them.

The public administration has two ways to approach the small private operators: either it considers they are socially harmful, so they need to be replaced with some other solution. Or it considers they are complementary partners to the official utility provider, so they need to be encouraged, and supported with adequate measures.

This second positioning is clearly more pragmatic.

- SPWPs are occupying large segments of the water supply offer in peri-urban as well as in rural areas of many countries. They probably may be the only viable operators for the foreseeable future.

- Despite unclear legal or operational status and limited access to the formal financial market, they bring significant investments in water supply systems.
- Recognising and supporting them may be a practical way to quickly increase service coverage and to reach governments' commitment of the MDGs.

Aiming at that objective, further research is required to assess how government, donors, and non-governmental organisations can facilitate and enhance the development of the small private sector. Up to now, the only conclusion which is clear is that there is no off-the-shelf universal solution. Copy-and-paste techniques need to be forgotten.

Some of the cross-cutting actions that should be considered in building a pro-small private sector platform and in realising optimal returns on public investments in the private sector provision of semi-urban or rural water can be outlined as below :²⁹

- Do not constrain private sector activity
- Understand the impact of regulation and avoid over-regulation
- Support the development of private sector capacity
- Tailor pricing controls or tariff schemes to local contexts
- Facilitate a better access to long-term finance
- Develop supporting expertise to enhance quality and sustainability
- Keep responsibility on essential government and donor functions

How to pull the informal operators into the formal economy is a complex issue. Too informal does not fit, but too formal could mean deterioration of ability and cost responsiveness. A pragmatic mid-way has to be found.

4.3. A new challenge

The private market has its own dynamics, its own pace. Brownian motion, but also entropy, are its universe. How to bring the water provision to millions of unserved people, together with the public authorities, is a huge and complicated challenge that is suddenly felt on the private sector's shoulders. The first attempts to address the issue have not been conclusive. Even Adam Smith would not have bet to the contrary. In the meantime, the same private initiative made a dramatic mess trying to understand how it could develop Internet. This does not mean that private internet-related businesses have no future.

But the private sector will not arrive so fast and in the convenient shape if the governments do not adapt the existing regulatory arrangements to suit smaller, less attractive markets, and to encourage and develop local private sector capacity.

Regarding the level of service to be provided, the governments have to use a demand-driven approach to leave communities to decide what households are willing and able to pay for.

An appropriate legal framework is key to create market confidence among private operators and to help them converge towards the right shape. More confidence has to be given to large international groups, not only to invite them to participate in big contracts in the metropolis, but also to invest on a long-term basis in the country. To manage a big deal in a remote place from the headquarters during ten or fifteen years is one thing; to decide to invest in a standalone subsidiary, able to trickle down in the national market and to tailor its own solutions according to the local specificity, is another kind of decision.

These multinational groups that have ultimately lost their appetite in many countries, will come back, as soon as conditions are conducive. It can be expected that the new wave will be different: less focused on tackling big one-shot contracts, more oriented towards real business development. Regarding operation in low-income areas, the multinationals have

²⁹ Following WSP (2004), p.10

learnt a lot during the last ten years. They can help to develop local markets, of course taking shares in it.

But in many countries, the main challenge is to adapt the regulatory framework in order to push upwards the existing SPWPs. It means:

- To recognise the social role of SPWPs' business, and to include them in the design of sector strategies
- To enhance the legal protection of their assets
- To formalise their relationship with the state (including to facilitate access to public markets and tenders)
- To encourage water utilities to work with SPWPs.
- To survey transparency and free competition
- To promote the legitimacy of professional organisations
- To support professional training and education
- To facilitate access to credit

The new approach of SPWPs is also a concern for international cooperation. Beyond the increasing number of NGOs which were already supporting some small private operators capacity building projects, like GRET in Haiti or Cambodia³⁰, some pioneering initiatives of institutional donors are opening the trail.

German GTZ supported the creation of the Association of the Private Water Operators of Uganda.

Triché et al. (2006) computed that the World Bank has already approved funding of WS&S projects dedicated to support local private sector in five developing countries, totalling services in more than 65 small to medium towns.

³⁰ In Cambodia, for example, the GRET's Program MIREP (Mini Réseaux d'Eau Potable) provides three forms of assistance to small independent network operators in rural townlets:

- Institutional support: Facilitating contacts between rural communes and private entrepreneurs, and helping contract design and endorsement
- Technical support: Giving technical support in the design and operational management of water supply stations
- Financial support: Providing subsidy up to 30% of the total capital investment (US\$ 40 per household), and facilitating access to commercial banks for the remaining amount, through guaranteeing some part of the loan risk.

The project, started in 2001, ends in 2006. 14 networks have been installed, supplying 18,000 people.

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