Alternative Providers: Recommendations

Cranfield UNIVERSITY

:

ALTERNATIVE PROVIDERS AND THE REGULATORY PROCESS

Who are the alternative providers?

To what extent do they need to be included in the regulatory process ?

With up to half of the population of some cities accessing water from alternative providers this channel of delivery must be recognised in the regulatory process

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Research Summaries

1. Regulating for the Poor
2. Economic Regulation
3. Literature Review
4. England & Wales
5. Chile
6. Argentina
7. Ghana
8. Philippines
9. Bolivia
10. Jordan
11. Zambia
12. Indonesia
13. India
14. Uganda
15. eConference
16. Alternative Providers
17. Customer Involvement
18. Technical & Financial Tools
19. Legal Tools
20. Pro-Poor Guidelines

Research Summary

Incentive based, economic regulation of monopoly water and sanitation providers is a powerful tool for improving services. Regulators determine the maximum water price ('price cap') to finance a desired level of outputs. Prices in high-income countries have tended to increase faster than inflation as society demands higher standards. The total revenue requirement (from which the price cap is derived) is determined by adding anticipated operating expenditure to planned capital expenditure (for capital maintenance as well as for improvements in quality, security of supply, service standards and service extensions), plus an acceptable cost of capital. Both opex and capex plans include efficiency targets derived from comparisons between a number of providers. Water companies are allowed to retain any further efficiency savings achieved within the price cap for a period (five years for example), an incentive to achieve even higher efficiency, before the benefits are shared with customers in reduced prices for the future.

This model has been adapted around the world with varying degrees of success, usually in the context of a Public Private Partnership, but until recently it has tended to be reactive rather than proactive regarding early service to the poor. There is now a recognised need for adequate economic regulation of public providers, as well as private companies, in lower-income countries, to deliver similar mechanisms for financeability and efficiency and as a prerequisite for developing effective pro-poor urban services.

The purpose of this DFID research project is to give water regulators the necessary technical, social, financial, economic and legal tools to require the direct providers to work under a *Universal Service Obligation*, to ensure service to the poorest, even in informal, unplanned and illegal areas, acknowledging the techniques of service and pricing differentiation to meet demand.

Looking to achieve early universal service, the research also considers how the role of small scale, *alternative providers* can be recognised in the regulatory process. *Customer involvement*, at an appropriate level, is seen as the third key aspect. The research investigates mechanisms for poor customers, and most importantly potential poor customers, to achieve a valid input to regulatory decision-making to achieve better watsan services within the context of social empowerment and sustainable development.

Alternative Providers

Regulators or agencies in charge of overseeing the delivery of water and sanitation services must have a good understanding of the water and sanitation market if they are to counterbalance its imperfections. In lower -income countries, this market is not limited to a monopoly provider supplying a largely homogeneous customer base with a fairly standard package of services. Inadequate infrastructure, underinvestment and the continuous pressures of rapid population growth and rising poverty levels far exceed the capabilities of conventional public service provision. The result is an irregular, fragmented market with a variety of agents, including a vibrant informal sector composed of dynamic private entrepreneurs. This "other" private sector (Solo, 1999) occupies the many gaps left vacant by the utilities, and in particular (but not exclusively) caters for lower and lowest-income households. This summary paper introduces these alternative providers and their customers, investigates their operations, the many problems and constraints they are facing along with their survival mechanisms. Having identified arguments for and against small-scale independent provision or utility cooperation with private intermediaries, it then seeks to explore the potential for incorporating alternative providers into the regulatory framework. The term "alternative providers" will be used throughout this section, encompassing all varieties of small-scale private provider, for which there are many terminologies, often used inconsistently by different authors.

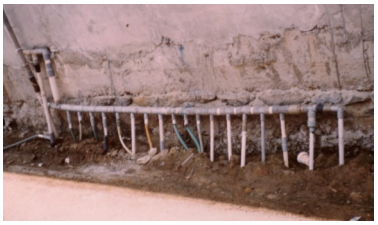
Alternative providers are as diverse as their clientele, offering a wide range of services suited to the requirements of the type of customer that a utility, restricted by high technical standards, inflexible pricing and management structures and legal provisions finds difficult to serve. In the water supply sector, the African Water Utilities Partnership (2003) classifies alternative providers into intermediate and independent service providers. Intermediate providers effectively act as utility extensions by purchasing bulk quantities of water and distributing it, whereas independent providers develop their own sources and supply systems, sometimes in competition with the utility. A small number of "pioneers" operate independent distribution networks with individual household connections; but vendors and resellers are usually the most commonly found type of alternative provider (Conan, 2003). These may either be working in partnership with the utility (e.g. stand post operators), or be classified as independent providers. The long list of types of alternative providers ranges from water tankers supplying un-served areas, water carriers providing a door-to-door delivery service, water points or kiosks owned or managed by communities or NGOs, privately managed utility stand posts to water being sold by neighbours or landlords with a household connection.

New ideas: drinking water sold in plastic bags

There is also an emerging niche market for bottled water, for low-income consumers sometimes distributed in plastic bags rather than bottles, with sales on the rise reported from many countries, such as Guatemala, India and Shanghai (Foster and Araujo, 2004); (Conan, 2003); (Raghupathi, 2003); (Llorente and Zérah, 2003). While many of the alternative providers' businesses are not officially registered, cases of illegal distribution of utility water have also been reported (WPEP, 2000). The definition of an alternative provider hence becomes somewhat ambiguous: it is difficult to draw boundaries between those simply operating within the informal economy, a common occurrence in developing country cities, and those engaging in outright theft and fraud.

Market Share

Alternative providers' market share varies widely. The lowest figures are reported from South Asia, where only about 5 – 5% of the total population buy water from vendors. This proportion increases to 20 – 45% in South East Asia (Conan, 2003) and can be expected to rise. In India, the stronghold of public service provision, about fifty private water businesses have emerged over the last twenty years in the capital city alone (Zérah, 1997). In Latin America, independent providers serve some 25% of urban households (Solo, 1999). In some cities more than half the population may depend on alternative providers, as for example in Guatemala City, where around 200 private providers



Left: Water delivered to the doorstep
Above: Community-managed small-scale network (both Jakarta, Indonesia)

operate alongside the municipal water utility Empagua (Solo, 1998). The most recent assessment of independent providers in African cities quotes market shares ranging between 30% and 80% (Collignon and Vézina, 2000). It was found that the significance of alternative providers increases outside of major urban centres (Collignon, 1998); (Solo, 1999). It should be noted that merely examining volumes of water supplied may be misleading, as low-income consumers tend to purchase the minimum quantities necessary for survival: In Port-au-Prince, Haiti, alternative providers "produce about 10 percent of the urban water supplied, distribute about 20 percent of the city's water, and reach some 70 percent of the households" (Solo, 1998). It remains unclear whether all studies included bottled water sales, so that the numbers quoted might still be an underestimate: According to an estimate of the Water Quality Association of the Philippines, for drinking purposes, nearly 45% of households in Metro Manila already choose bottled water over tap water (WPEP, 2000).

Water tanker delivery in high income area in Amman, Jordan

Strengths and Weaknesses

Given that some form of alternative provision can be expected to remain a common and essential feature of urban water (and sanitation) markets within the foreseeable future, the quality of service delivered by independent operators or private utility partners needs to be evaluated – from the point of view of their customers. The overriding concern of all opponents and sceptics are the rates charged by alternative providers: "Exorbitant prices" and "overcharging" are frequently mentioned in the literature as arguments against small-scale private operators (Zaroff and Okun, 1984); (Espinosa and López Rivera, 1994); (Vézina, 2002). An overriding profit motive, anti-competitive monopolist behaviour, sometimes with the illegal involvement of corrupt utility staff, and the threat of capture by local elites or mafias are feared to exclude vulnerable groups and reinforce existing inequalities. The safety of alternative and mostly unmonitored drinking water supplies has also been questioned. There are minor, secondary concerns about the possible irregularity and unreliability of supplies (Zaroff and Okun, 1984), the lack of qualifications of staff employed by small-scale independent enterprises, and the long-term sustainability of independent providers' activities, for instance where they are contributing to the over-abstraction of local groundwater resources. As most alternative providers operate unregistered, informal businesses without paying tax, theoretically there are significant losses to the local tax base.

In contrast to these criticisms stands the unanimous agreement on the alternative providers' good understanding of the market, their customer responsiveness, and remarkable resourcefulness in finding simple, but effective solutions under the most adverse operating conditions. Collignon & Vézina (2000) describe the typical African independent water provider as "a versatile man, risk and publicity averse; capable of raising important sums of money when necessary, but

"Tangki Air Bersih" – the trucks only supply "clean" water, not drinking water (air minum). Jakarta, Indonesia

Compound landlord on selling to compound tenants at significant mark-up through metered standpost.

Strengths and Weaknesses

without a logo or a front office…" The ability of alternative providers to recognise needs, their flexibility in adapting to low-income customers' circumstances and the operational efficiencies they achieve in their businesses put many utilities to shame. Authors positively note the generally good and often personal relationships between suppliers and customers (Raghupathi, 2003): small-scale providers make "contracts with customers, not with governments" (Solo, 1999). They know customer habits and preferences, and the financial situation of households served. When families are experiencing payment difficulties, many independent providers offer unbureaucratic solutions, adjusting payment plans to customers' income schedules or even delaying payments (Troyano, 1999).

The sometimes considerably higher prices than those charged by the official suppliers are ascribed to basic economics: without access to public subsidies and conventional financing, independent small-scale businesses invest family savings and are consequently forced to achieve full recovery of all costs (Solo, 1999). They simply operate in a competitive market where consumer demand and willingness to pay, existence of competitors, operating costs and seasonal variation of supplies dictate prices. Recent study results indicate that profit margins are in fact low, and operators are surviving on modest incomes (Vézina, 2002); (Collignon and Vézina, 2000); (Conan and Paniagua, 2003). A comparison with official utility tariffs also touches on the subject of often misguided subsidies, which have been exposed as benefiting middle- and higher-income groups rather than supporting the those in need (Foster, 1998). Whilst Llorente and Zérah (2003) criticise alternative suppliers for only providing peripheral solutions, Solo (1999) cites their readiness to see beyond the official city limits and experiment with innovative, unconventional technologies as admirable strengths. Probably the most important difference between water utilities and small-scale alternative providers is that utilities are established within political and administrative boundaries, rather than developing naturally along geographic or cultural lines (Troyano, 1999), and alternative private providers cut across geographical, income or even class boundaries.

Irrespective of the various studies' economic assessments and moral judgments on the value of alternative water services, the fact is that small-scale private operators are providing a vital service, and much of their success can be attributed to a thorough understanding and constant observation of a continuously evolving market. Officially their contribution is rarely recognised (Conan, 2003), and where informal business verges upon illegality, the operators face a major obstacle which takes more than technical ingenuity to overcome. Communication with public authorities is likely to be non-existent, and the attitude of formal (private) monopoly providers, protected by exclusivity clauses in their concession agreements, may range from tolerance to outright hostility (Collignon and Vézina, 2000). Obel-Lawson and Njoroge (1999) report that even where official policies have been reformed they are unlikely to accommodate independent providers.

Water vendors keeping count of delivery rounds at the filling station. Jakarta, Indonesia

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Research Findings

The country case studies show that alternative providers are indeed a regular feature of water supply (and sanitation) services to the urban poor in the developing world, where they 'provide an indispensable service to those sidelined by the public utility systems' [**8**] *Note: Numbers like this one refer to the relevant summary paper, so 8 here stands for the Manila case study.* There are preciously few exceptions, though it must be noted that the sample for the *Regulating Public and Private Partnerships for the Poor* project is biased in favour of capital and metropolitan cities where economic regulation of various forms of 'partnership' is most developed. Observations may not necessarily hold true for secondary towns, and recommendations based on conclusions drawn from the case studies would have to be treated with caution in this situation.

Even in cities with exceptionally high connection rates alternative providers were found as vital players in the urban water market, cutting across income boundaries. The case of Amman, where customers resort to tanker truck deliveries to supplement heavily rationed piped water supply, demonstrates that alternative providers are not solely a low-income phenomenon [**10**]. None of the common water vending in small containers was encountered in the Zambian capital, but Lusaka still relies on alternative models of provision to serve its urban poor. A high level of involvement of international development partners in the city's peri-urban areas explains the absence of the 'conventional' water vending systems [**11**]. With the exception of Chile, from where no alternative modes of supply were reported in Santiago [**5**], even the comparatively well-managed systems in Latin America leave service gaps, which are in turn filled by alternative providers, albeit to a much lesser extent than in African or Asian countries.

In none of the cases examined does the present regulatory framework provide for economic regulation of alternative providers' operations. This would of course be expected for a (largely) competitive market, where the main justification for regulatory intervention (*c.f. Literature Review,* [**3**]) is absent. In the context of a well-functioning (and thus self-regulating) private provider market the application of fair trading law and water quality regulation would be an adequate level of regulation. However, the case studies present compelling evidence that anti-competitive behaviour and disregard for other regulations can be widespread. This paper discusses various combinations of regulatory risks and inadequate oversight mechanisms, as well as regulatory attempts to deal with alternative providers. Based on the regulatory challenges identified from the case studies, recommendations are made for incorporating alternative providers into the regulatory framework to minimise potential negative impacts on poor urban consumers. In view of the long-term objectives for the structure and organisation of the urban water market, a distinction must be made between independent and intermediate providers in terms of the type and level of regulatory intervention required. [This research is based on the presumption that all household should be able to enjoy the convenience of piped water supply within the home. This long-term objective for urban water services would lead to a gradual phasing out of intermediate providers, as even the poorest households will be given access to the economies of scale derived from a piped distribution system.]

Inadequate oversight mechanisms

The case studies show that current oversight systems, where existent, frequently fail to deliver the desired levels of service and consumer protection. Existing rules and regulations need to be re-examined in view of their implications for alternative providers, their conventional (utility) counterparts and, ultimately, service delivery to poor urban households. Economic 'regulation' of the alternative provider market rarely extends beyond abstraction licensing and tanker truck registration. Any further regulations impinging on economic activity of alternative providers frequently result in them operating on the verge of illegality. In Ghana, for instance, customers are required to obtain approval from the water utility in order to on-sell water. Vendors, however, were found to be operating without the utility's consent [**7**], and Amman's water tanker drivers admit to exploiting customers' ignorance and the lack of enforcement on the part of the water authorities when exceeding maximum price limits set by the government for their resale activities [**10**].

However, legal transgressions may not always occur through malicious behaviour on the part of the alternative providers. Rules may simply go ignored due to the opaqueness and complexity of the regulatory system, where regulations are either unknown or clear lines of responsibility cannot be discerned [**8**]. Whether disrespect of regulations is

Regulatory Risks

blatant and widespread as in the case of some Jordanian tanker drivers or it is rather a matter of lack of information or interest (both on the part of alternative providers and governments as regulators), the cases highlight the importance of monitoring and enforcement by regulatory agencies, as well as the need to strengthen customer protection through readily accessible information, complaints handling and redress mechanisms. Registration, as seen in some case studies,

Above: Central tanker filling point

may be a first attempt to provide some level of oversight for alternative providers, with the registration data providing a first point of reference for establishing an information data base on alternative providers.

It is not uncommon for existing regulations to give an (unfair?) competitive advantage to formal, utility water providers, in spite of their inability to deliver services to large proportions of the population. Examples for this are exclusivity rights granted to large water utilities, which span the entire service area, even if contractual coverage targets may not envisage the entire population receiving piped water services until the end of the service agreement (or, worse still, have been revised to reflect the inability of the utility to reach 100% of a city's residents within the lifetime of the contract– *Manila, Jakarta* [**8**,**12**]). Bulk water may also be supplied by the main provider at less than favourable rates. In Manila independent providers distributing utility water were found to be paying high commercial water prices rather than the cheaper domestic rate [**8**]. From Uganda the practice of charging VAT on water sold to alternative providers was reported [**14**]. Regulation is called upon to balance the trade-off between avoiding inflated bulk water rates, which hurt end users as on-sellers pass on their costs, and allowing utilities to pursue a commercial pricing policy. Supplying water to intermediate providers at the subsidised domestic rate is likely to threaten the utility's ability to achieve cost-reflectivity in order to finance necessary investments.

In defence of any 'utility bias' the large revenue shares currently being diverted into the informal sector (see price comparisons in the next section) must be considered. The size of the alternative market effectively limits the revenue available to the conventional provider and reduces the opportunity to become commercially viable. Of course, before market shares can be adjusted in favour of utilities, the regulatory system must ensure that the main provider is in a position to provide adequate and affordable services to the poorest households in those areas that are traditionally viewed as 'difficult to serve'. Likewise, 'top up' services such as tanker deliveries cannot be eliminated unless the utility can meet the needs of its entire customer base.

Other inadequacies in current regulatory (and legal) frameworks threaten the continuity of service to urban low-income areas. Successful pro-poor water service programmes implemented by formal providers out-compete small-scale independent providers. Faced with the risk of takeover by a larger and financially better equipped competitor, small entrepreneurs can be reluctant to continue to invest in much-needed water services for the poor [**7**,**8**]. The lack of an enabling legal framework that would protect independent providers' investments and allow cooperative arrangements between alternative providers and utilities to harness the 'pro-poor service skills' acquired by the former can only be regarded as a serious shortcoming. This is particularly damaging to the underserved poor who continue to settle outside of the utilities' service areas as city boundaries expand to accommodate population growth and in-migration.

Regulatory risks

The case studies confirmed the regulatory risks

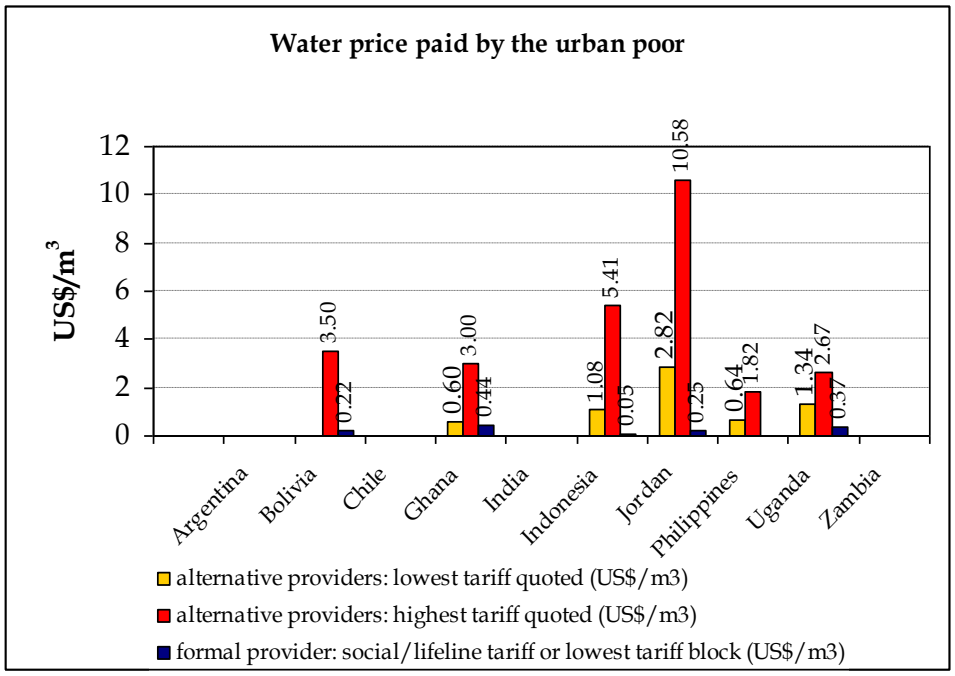
inherent in informal and largely unregulated water markets, where prices fluctuate in response to availability of supply and consumer demands. In addition, water quality as well as environmental impact of alternative providers' operations is a major concern. Alternative providers may be knowingly or unwittingly infringing on existing legislation or exploiting loopholes in the law, such as abstraction, planning and business regulations. In doing so, there is a risk that their activities are contributing to looming environmental crises, such as groundwater over-abstraction and seawater intrusion into aquifers [**10**,**12**,**13**]. Likewise, in the absence of strict water quality controls, the diffuse small-scale provider market can represent a significant public health risk. For regulation of small-scale private water markets to be effective, there may be a strong case for economic, water quality and environmental aspects to be considered jointly.

Given a healthy amount of competition, prices will reflect the cost of provision and respond to consumer demand. However, the case studies demonstrate that due to cartel formation and mafia-like tendencies an oligopolistic market structure has developed in some locations, which warrants regulatory intervention in order to control profit-seeking behaviour of some private providers. Compared to the subsidised – usually higher-income – groups able to access piped water from municipal networks, poor households pay significantly more per unit of water (as shown in the graph below right).

Relative to the cheapest domestic rate available from the main provider (sometimes designed as a social or 'lifeline' tariff), the poor may be paying as much as 108 times for water delivered to their home [**12**], though ten to twenty times the lowest tariff seems to be the going rate for alternative supplies. Worst case scenario figures from Jordan are distorted (43.2 times) as the rich frequently resort to tankers during water shortages, but even here the poor end up paying on average 11.5 times more when forced to buy tanker deliveries. The Amman case study demonstrates how effective prices paid by low-income households having to invest in coping strategies and accessing alternative providers reach levels comparable to and higher than those paid by high users and high-income customers [**10**]. Although not pictured in the graph, notable is also the relative stability of formal water tariffs compared with considerable price hikes for alternative suppliers that were observed in some case study locations [**12**].

The disproportionally high prices paid for vended water by a large fraction of the urban poor raise questions about equitability within the tariff setting framework for conventional providers. The research findings point to a huge revenue potential which could be unlocked. The challenge is for formal providers to penetrate the low-income water market and capture revenue flows being 'lost' to the informal market, which could be used to finance network improvements and extensions allowing the underserved poor to access the economies of scale derived from a piped distribution system.

Conversely, some cases have highlighted the threat alternative providers can pose to the main providers. Where customers are not legally obliged to remain connected to formal networked services, vendors - mainly tankers - are siphoning off lucrative customers



Minimum and maximum prices quoted for water supplied by alternative providers in the ten case study countries (England and Wales omitted). No significant alternative provider activities were observed in Argentina, Chile and Zambia.

Regulatory Challenges

Experiences in regulating alternative providers

Attempts have been made to regulate the alternative, small-scale, private market to support low-income urban customers who are most at risk from predatory pricing and water quality lapses. The only example of price regulation for alternative providers has been reported from Ghana, where the regulator PURC sets resale prices for standposts as well as water tankers. Although a Memorandum of Understanding between the tanker operators association and Ghana Water Company Ltd adds a further layer of regulation and encourages self-regulation of members, in practice the system fails with respect to the quality of water delivered to poor customers as effective monitoring systems are not in place. Further regulatory gaps identified by the regulator include complaints handling, mechanisms to reduce prices and counter the development of cartels [**7**]. The latter is a major concern of the regulator in Jakarta, who is seeking to disentangle the web of water mafias and vested interests in the status quo by promoting transparent community management practices [**12**]. The Zambian example cited earlier on demonstrates how partnerships arrangements can be very effective in reducing opportunistic exploitation of poor communities by some alternative providers or, worse still, corrupt utility staff colluding with private resellers [**11**]. However, regulators sometimes struggle to find the necessary support. The Jakarta regulator has been encountering legal and political obstacles when seeking to establish community-based partnership arrangements as interim solutions to help the underserved poor [**12**]. Deregulation measures, intended to ease access for new market entrants and to relieve the financial burden to customers through lower prices associated with greater competition, may opposed by incumbent small-scale providers. The legalisation of household resale in Jakarta allegedly had to be discontinued to prevent perceived profit losses of standpipe operators [**12**].

Remaining challenges

A number of regulatory challenges remain. One major obstacle to any form of regulation of alternative providers is the major information gap and the limited resources regulators have at their disposal in the face of a large and diffuse market. However, regulators contend that it is the availability of information determines the quality of regulatory decision-making, and therefore efforts should be made to improve the quality of available data (comments received at the project's *Review Workshop*). This need and should not go as far as collecting information on each and every alternative provider. The case studies show, however, that it would be beneficial for regulators to have an overview of water sources used by alternative providers, quantities distributed, areas of operation, and end user prices – for customer protection reasons as well as to obtain an estimate of the return on investment achieved by the providers. It was also noted that the required surveying work may exceed capacities of regulators as well as putting additional strains on the regulatory budget. In response to this, it was suggested to seek partnership arrangements with collaborators on the ground (e.g. NGOs, community and residents associations; [**8**].

Other open questions include how to

- determine an optimum level of regulation and practicable regulatory arrangements that regularise the informal market but do not undermine its flexibility;
- maintain a light-handed approach to regulation in order to avoid the increase in overheads leading to end user prices and/or service deterioration associated with an over-emphasis on high technical standards and formal procedures;
- offer accessible and responsive customer complaints procedures;
- set up effective monitoring and enforcement mechanisms;
- provide legal/regulatory protection for small-scale private investors;
- increase transparency where price regulation is deemed impractical or unenforceable.

Pay per use public showers above, meeting needs at a fair price

Regulating Alternative Providers?

Conclusions and Recommendations

Research suggests that in many locations full service coverage through conventional providers (utilities) is unlikely to be achieved in the short or medium term under present arrangements. It is therefore suggested to recognise the vital contribution of alternative providers to urban water service provisions, building upon their strengths and – at some level – incorporating them into the regulatory framework to minimise potential negative impacts on poor households.

The published literature offers very few recommendations on the subject. Most authors put their faith in a loosely regulated market, maintaining that regulation within an adequate legal framework (Conan, 2003) that supports a healthy level of competition will promote expansions whilst ensuring affordability for poor households. Components of regulation that receive particular mention are customer protection (Collignon and Vézina, 2000); (Raghupathi, 2003), transparency and information-sharing, and performance-based regulation is favoured over technical (input) specifications (Solo, 1999).

The aspects of regulation (price, water quality, market entry and market share) relating to alternative providers have been identified in the literature (e.g. Plummer, 2002), but very few tentative suggestions have been made as to what these future regulatory arrangements would have to be. Plummer (2002) recommends relaxing performance standards and exclusivity rights given to utilities, supporting alternative providers in securing legal contracts, revising tariff regimes, addressing land tenure issues and disseminating a "spirit of inclusion" amongst the incumbent large-scale service providers. Trémolet and Browning (2002) propose replacing costly 'traditional' regulation through price and quality standards with making performance data publicly available, thus relying on the regulating effects of reputation. "In any event", they conclude, "the choice of regulatory instruments should be based on a comparative assessment of the trade-offs between effectiveness, ease of implementation and costs and benefits" (p.6).

There seems to be universal agreement amongst the sector professionals questioned during the course of this research that some form of official recognition of alternative providers would be beneficial. Independent small-scale providers could potentially be treated as 'micro-utilities' and issued with an operating licence, which would regulate service provision to end users under similar, though perhaps simplified, terms to those specified for utilities. There is less support for licensing of intermediate providers (vendors and resellers who effectively act as an extended arm of the utility), who may be captured more effectively and efficiently through third-party agreements between utilities and individual alternative providers without direct involvement of the regulator. Some experts argue that the potential for successful regulation is severely limited in the case of certain forms of alternative provision, and only public health considerations warrant continued government involvement:

> 'Truck transportation is generally a business better managed by private enterprises, whose regulation by administration is barely effective.'
>
> Collignon, *eConference* [**15**]

In light of the occasionally expressed opinion that regulators should concentrate on the (explicitly mandated or perceived) key task of promoting efficiency gains from the main, formal providers and making small -scale competitors redundant in the long-term, the question remains to what extent economic regulation should integrate alternative providers into the regulatory framework.

Few practical and immediately executable solutions could be derived from case study findings or were proposed by water professionals involved in this research. Consumer education is seen as a key factor in addressing the price regulation problem.

Left: Published prices, a good approach which does not preclude tanker drivers selling part loads at full load rates.

One recommendation was to publicise cost and pricing information and thus to exploit the self-regulating effects of making vendors' price mark ups clearly visible to end users [**7**,**14**]. However, whilst some level of price regulation may well be achievable for independent providers (producers), encouraging fair competition could be the best regulatory option for vendors' resale prices at present. A major consideration here should be the cost-benefit ratio of regulatory intervention, as the associated monitoring and enforcement costs appear prohibitive, especially as overheads would have to be passed on to an already

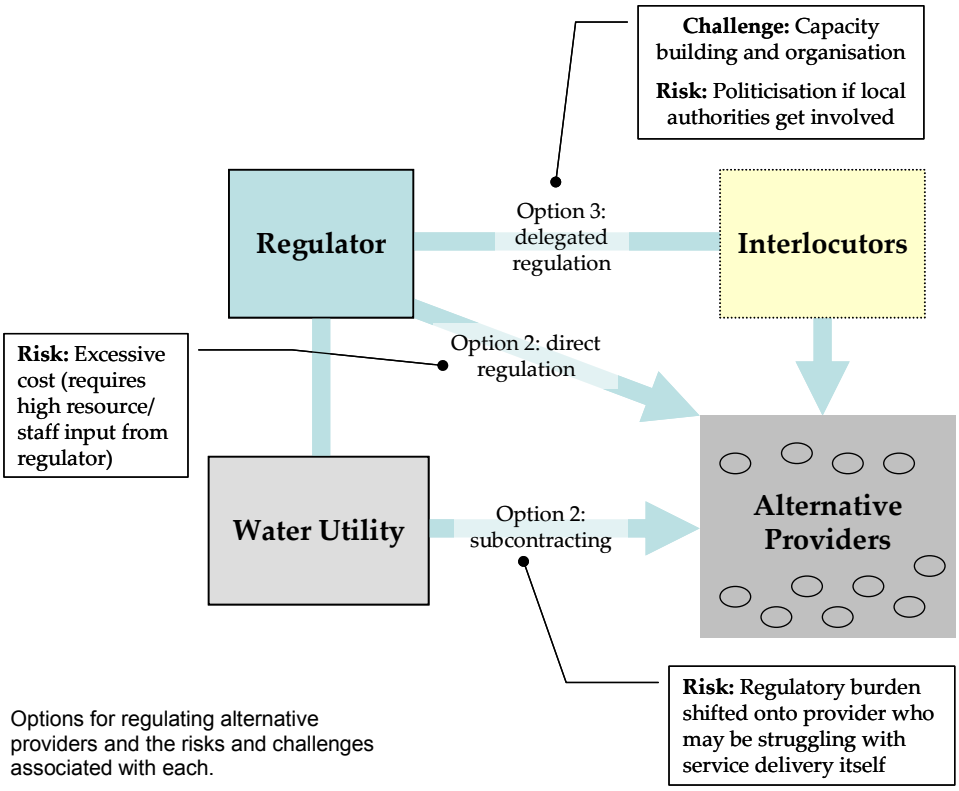
Regulating Alternative Providers?

overburdened customer base – unless these could be carried out less bureaucratically and efficiently by lower level administration and/or the main provider (e.g. through the above-mentioned third party agreements) – and may simply not be practicable from the regulator's as well as the alternative providers' (and consequently the customers') perspective.

Specific recommendations for preventing monopoly pricing were given with reference to tanker operations. Collignon [**15**] sees the role of the regulator in guaranteeing equal access to public water sources, encouraging market entry by enhancing tanker drivers' social status through official recognition of their activities, and reducing overheads by lowering delivery distances and selling bulk water at social rates. Formal bulk water agreements, guaranteeing fixed quantities of treated water to be supplied by the utility at a competitive price, could be overseen by a regulator. In order to achieve maximum impacts in terms of public health, economic regulation of alternative providers cannot be separated from water quality regulation. As with prices, minimum water quality standards are potentially easier to monitor and enforce for independent providers than for vendors and resellers, and the same principles apply. In view of the immediate health hazard, easily accessible complaints procedures need to be in place to report service failures. In line with

As indicated above, a general framework for regulating alternative providers may have to be set out in legislative terms. The typology of alternative providers in terms of scale of operations, ownership structures and mobility is the determining factor in framing this legislation. Regulators may have to act as facilitators and advisors to policy-makers and demand clarification of the government's position with regard to alternative providers, as strictly speaking some decisions are outside of regulators' remit. A regulator, however, could present a compelling case for refining the regulations with respect to service obligations, both with respect to the obligation of a utility provider to connect new customers and the obligation of residents to subscribe of networked water services, as and when these become available. Geographical zoning or time-limited operating licences may be one approach to solving the problem of competition for high profit customers and the undermining of cross-subsidy systems. Here it is important to recognise any vested interests in the status quo, as the examples of illegal 'collaborations' between utility staff and alternative providers [**12**] or large profit margins for government from abstraction charges, where alternative providers access groundwater resources [**10**] show.

In delineating alternative providers' spheres of operation, due regard should be given to the regularity of supply, which is often not guaranteed by the main provider, but which this research has shown to be a major determinant of customer confidence on a par with water quality issues. Regulators should formally acknowledge the role of alternative providers in providing a vital public service, and facilitate dialogue between utilities and small-scale partners in order to identify opportunities for win-win solutions which ultimately benefit poor urban consumers. There may also be a role for the regulator to lobby for political (and hence regulatory) endorsement of alternative, community-based partnership arrangements.

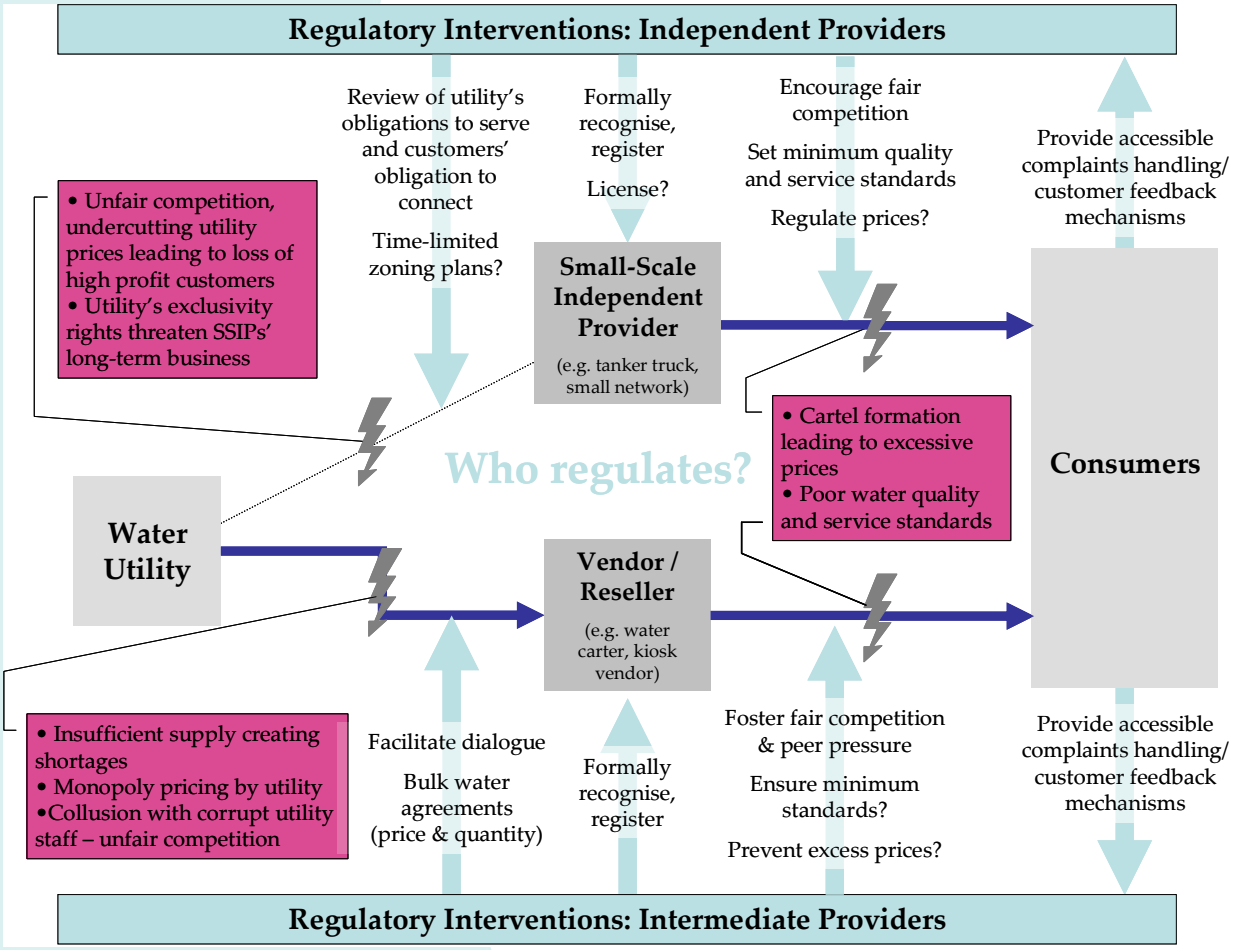


Options for regulating alternative providers and the risks and challenges associated with each.

The diagram (left) summarises the main options for regulating alternative providers and risks/ challenges for each - however, it must be stressed that in most cases

Alternative Providers: Recommendations

The diagram below summarises major regulatory risks associated with service provision by alternative providers that have been identified during the analysis of case study data (pink boxes). In response to these conflicts it also suggests potential regulatory interventions (light blue arrows) applicable to independent and intermediate providers respectively. These proposals draw on the recommendations formulated for the different case studies as well as discussions with and between regulators, researchers and various water professionals held during the project Review Workshop and eConference.



Above: Regulatory risks and possible interventions in the alternative provider market

The best approach to 'regulating' alternative providers (including whether and to what extent to regulate them at all) will always be highly case specific. This research may not offer definite answers, but it highlights the regulatory risks that justify some level of regulation of alternative providers. Recognising their role, especially in delivering water services to disadvantaged households, is a first step towards more equitable and sustainable service provision. Furthermore, the case studies give an overview of the kinds of questions that need to be considered in order to extend the benefits of regulation, such as enhanced consumer protection, to the often poor urban customers of alternative water service providers, whilst building on the flexible service approach the best of the alternative providers can offer. Regulators face many challenges and may have to temporarily embrace less conventional arrangements in the pursuit of the ultimate goal of an affordable water connection for all households, irrespective of their incomes. Efforts need to be made to give incentives to utilities to take over their small-scale counterparts' customer base, hence enabling the urban poor to benefit financially from large-scale service provision without losing the convenience and flexibility of a small, local