

the service area used, could be described as pro-poor. However, unable to resolve the complications arising from the contract ambiguities, SISAB was not perceived (or arguably, portrayed) as advancing the interests of the poor.

While Uganda had no pro-poor regulatory strategy in the performance indicators agreed with the contract monitoring board, there have been significant pro-poor developments in the water services sector. The motto "Some for All and Not More for Some" originates from within the entity with overall responsibility for water services delivery. Efforts were being made to extend services in an equitable manner. The water company dropped its disproportionately high fee for making a physical connection to the water network, "offering free connections to all properties within 50 m of the water main, to assist low-income households gain first-time access to piped water supplies. The challenge of extending water mains to within 50 m of unserved slum dwellings remains, however.

The Jakarta Water Supply Regulatory Body had not published a statement of its pro-poor intentions, but regulatory staff showed a high level of awareness of consumer issues beyond its customer protection mandate. The chief regulator perceived it as his role to "understand ... different [stakeholder] characteristics and try to protect the poor/low [-income consumers]" (Lanti A, 2004, personal communication). JWSRB has worked towards achieving this through formal customer involvement and exploring alternative financing and service arrangements for presently unserved low-income communities. The early introduction of a "Water Voice" system in Jakarta, modeled after the customer committees found up until recently in England and Wales, reflected the regulator's concern to adequately represent the public interest in regulatory decisions and to comply with his customer protection mandate, as well as the need to legitimize regulatory decisions that extend into the social policy domain.

(iii) *Strategic pro-poor bias*

The Ghana case study research findings initially noted the lack of explicit strategies, milestones and incentives to drive poverty-aware, universal service provision. The 2005 "Social Policy and Strategy for Water Regulation," however, spelled out the regulator's commitment and leadership aspirations with respect to pro-poor service achievement. Mandated to regulate the provision of water services and "to protect the interest of consumers" (Government of Ghana, 1997), PURC interpreted this as encompassing presently served and unserved water consumers, setting out objectives to provide mechanisms for improving access and affordability of basic services for the urban poor, emphasizing the role of consumer involvement and present "secondary providers." Critics might argue these statements took a long time to emerge and are yet to be backed with substantive actions but the same can also be said for England.

NWASCO, Zambia, clearly perceived its role as an advocate of the poor, and has defended this bias towards social aspects of its regulatory work. The regulator worked closely with the Devolution Trust Fund, which was established as an instrument for extending services to low-income and peri-urban areas, issuing pro-poor service guidelines and minimum standards for kiosk management. In addition, the regulator facilitated the incorporation of the consumer voice into the regulatory process. Contrary to its Ghanaian colleagues, NWASCO had made significant progress since its comparatively late inception, emerging as a model organization in South-South development cooperation. Water Watch Groups (WWGs), groups of competitively selected, trained volunteers receiving logistical support from the regulator, are a particular

feature of the Zambian regulatory setup⁸ that serves as formal communication and feedback link between regulator and customers. WWGs primarily serve the purpose of directly involving communities in continuous service quality monitoring, but were also found to be acting successfully (as successfully as any such consumer involvement can be) as a first level of arbitration between service providers and customers, handling complaints and educating consumers on their rights and responsibilities.

4. LESSONS FOR A PRO-POOR REGULATORY PROCESS

Given the framework conditions and responses discussed in the previous section, the regulators' present and potential future role in facilitating the goal of pro-poor, universal service (in locally appropriate variants) is less than straightforward. The research concluded that regulators need to be supported in: identifying more clearly the needs of the underserved, developing an understanding of a range of differentiated service delivery mechanisms, moving towards cost-reflective tariffs for conventional customers in order to facilitate creative services to the poor, and in developing leadership within the context of overall governance.

(a) *Identifying needs*

Improving the knowledge base on low-income consumers and their providers within the regulated service areas is a prerequisite for designing "pro-poor" utility services. Regulators have recognized this central role of information. Based on a 2002 socio-economic survey in Ghana, PURC developed a simple, but therefore workable, definition for the "urban poor," who were identified as "those without direct access to utility supplies, who depend on secondary suppliers, and who buy by the bucket or container." A more systematic approach was taken in Zambia to provide the regulator with accurate baseline information. A study mapping consumers, service levels and infrastructure status in peri-urban and low-cost settlements, and taking into account a new definition of "access to a sustainable water supply" and considering only installations that were actually functioning, resulted in a downward revision of official coverage statistics (Anonymous, 2006).⁹ The data feeds into NWASCO's monitoring and information system, allowing the regulator, interested stakeholders and the general public to track progress of individual utility providers and the overall implementation of sector policies and targets. The development of a similar information system for the Kenyan WSRB encountered institutional obstacles when an application for funding to undertake an informal settlements baseline survey was rejected as "not relevant and sustainable" (Gerlach, 2007). It can be expected that the logical next step of improving and streamlining definitions and indicators used in routine data collection and surveying carried out by national monitoring bodies to enhance the quality and consistency of available water and sanitation data and avoid unnecessary duplication of efforts may be met by similar ignorance and resistance. In contrast, the Ministry of Urban Development, India, as part of its pre-regulation approach, is re-launching a benchmarking exercise (MUD, 2009) and has included 'improved access, targeted subsidies and incentives, participatory planning mechanisms' as the aspects of "services to the poor" categories which might be eligible under the National Urban Water Awards 2009 (ASCI, 2009).

(b) Developing appropriate, differentiated, service responses

A number of regulators have, in consultation with consumer groups, taken practical steps towards price and service differentiation, the case for which has been argued on economic grounds for some time (Baker & Trémolet, 2000; Sansom et al., 2004; Smith, 2000). Authors had called for more pragmatism in regulatory controls on pricing and service quality, allowing providers to adopt low-cost innovations (in technology or customer service levels) that better correspond to low-income consumers' willingness or ability to pay. While the latter remains notoriously difficult to ascertain, some regulators are now accepting the fact that they may have to—at least temporarily—embrace less conventional service arrangements in the pursuit of the ultimate goal of an affordable water connection for all households (Gerlach & Franceys, 2009b). Following the example of some private concessionaires' successful service expansion to poor consumers, arguably encompassing the principle of demand-responsiveness out of necessity (Jacobs & Franceys, 2008), JWSRB in Jakarta was seeking to replicate "Manila-type" group connections (whereby a group of households are served through a single meter with one household or community agent responsible for payment on behalf of all) in an effort to disentangle the web of vendors' "water mafias" by speeding up access to formal pipe networks. Formalizing resale activities was the favored approach in Zambia's peri-urban settlements, where kiosks under professional management are being promoted by NWASCO's Devolution Trust Fund as an effective and economical option to serve the urban poor. Addressing the questions of alternative providers and an appropriate level of consumer involvement is critical to any attempts to introduce price and service differentiation in the LMIC urban environment and lay the foundations for a pro-poor regulatory process. At the time of fieldwork a number of regulators had attempted—more or less successfully—to involve consumers in the regulatory process in order to improve demand-responsiveness, accountability, and to support the legitimacy of decisions in view of weak regulatory mandates.

(c) Finance and planning: funding and sustaining universal service

In the context of economic regulation, the importance of moving towards financial (self-) sustainability for the sector cannot be over-emphasized. Appropriate low-cost options enabling poor consumers to access formal services need to be matched with appropriate tariff structures, which should allow the service provider to recover the costs of everyday operations and ongoing capital maintenance, as well as, ideally, generating revenues that enable debt servicing of capital investments. An appropriate tariff level for conventional customers, perhaps the main driver for much economic regulation, is as critical in facilitating appropriate services to low-income customers as any other measure. Enabling viable tariffs remains a critical challenge for regulators in LMICs, as illustrated by this recent statement by the Zambian regulator: "One of the greatest leaps made so far has been the separation of water pricing from the direct control of politicians" (NWASCO, 2008). Given the propensity of political actors to intervene, interfere or retain control over tariff setting observed in the case studies, NWASCO's success in doubling some tariffs during a general election year in Zambia was a critical display of a new regulator's authority. Where private operators are involved, allocation of responsibilities, financial risk and profits were—unsurprisingly—found to be even more

contentious. The Jakarta case illustrates the potentially perverse outcome of an arguably pro-poor contractual arrangement that effectively shielded the private operators from any commercial risk involved in serving low-income households. Bound by a complex financial setup which de-linked utility revenues from customer tariffs, JWSRB was unable to prevent the introduction of a connection quota in favor of the wealthier classes to maintain the required average tariff, illustrating the problematic of concurrent demands for cost-reflectivity and low charges for the lower tariff groups.¹⁰

Though poverty may be less striking in Chile, a look at this case is instructive as it underlines the necessity of recognizing a divide between "ordinary," fee-paying customers and those with little means to make contributions to service provision. The latter are taken care of under social welfare programs so as to not jeopardize service for all. While it may be tempting to suggest disconnecting "social" from "economic" decisions as a way forward to facilitate a rational debate and practical measures outside or rather alongside the regulatory process, the England and Wales case highlights how difficult this is to achieve. Governments often also find it hard to appreciate the role of profit as an incentive for efficiency in service delivery. Especially with short term contracts the mismatch between small incentives and big challenges reduces the potential for service improvements, as stated plainly by stakeholders involved in the Amman management contract. Assessing the scope for efficiency gains and thus curbing windfall profits is difficult,¹¹ especially in the absence of established benchmarking systems in many case study countries. Data and reporting inadequacies prevented the preparation of sound, pro-poor business and asset management plans—the latter providing a basis for economic regulation in established systems—planning being further complicated by the frequent ambiguities regarding operator, asset holder and supervisory/regulatory functions, and overlapping financial and investment responsibilities.

There also appears to have been little progress with respect to tariffs and subsidies, particularly with regard to all-important connections fees, as the research findings broadly concur with the published literature (Boland & Whittington, 2000; Franceys, 2005; McIntosh, 2003). Despite evidence that tariff structures are equally, if not more, important than tariff levels, the latter continue to feature most prominently in the regulatory debate. Lifeline tariffs were the single most frequently cited pro-poor measure in the case studies, despite their inherent bias against multi-occupancy households and the vast majority of the unconnected poor. A simple comparison of formal water tariffs, which are protected "in the public interest," with the effective prices paid by poor consumers, that is including coping costs and inflated prices paid to alternative providers where or when no formal connection is available, proved that tariff levels were not the primary concern of poor households. Again, inadequate information made it difficult for regulators to distinguish between perceived and actual weaknesses in existing tariff arrangements and to evaluate their impact on the poor.

(d) Governance and leadership

The case studies provide evidence for some positive developments in terms of regulators demonstrating a capacity and willingness to achieve a suitable balance between the social and economic objectives of water service regulation. It is worth noting that the "most visibly" pro-poor regulators were enabled to take a proactive stance and assume pro-poor leadership. For instance, legalization of peri-urban settlements in

Zambia placed the local low-income population within NWASCO's remit. However, in conversation the Chilean and Jakarta regulators made it clear that there are limits to the extent to which they can lead the process of shaping the regulatory framework. They insisted on a clear boundary between policy-making and regulation, but conceded that to a certain degree they perform a mediator role and provide expert advice to the government. This interplay between policy and regulation is part of the development of regulatory systems. The relevance of shifts in government policy and consequent legislative changes is particularly marked in the case of E&W, where growing concerns over the social impacts of rising water bills precipitated a change in emphasis of regulatory duties. This and the Chilean example suggest that in the first instance, it is a policy matter to ease the transition from social/public to commercial service by providing alternative social protection measures, the administration of which may form part of the regulatory duties.

While the research was not explicitly designed to investigate regulatory policy, implementation and outcomes from an institutional perspective, the obstacles to universal service consistently pointed back to the wider institutional framework. Most notably this concerned the legal and policy frameworks, but also society's attitude towards and interpretation of "universal water service" and the acceptance of a new organization more or less explicitly charged with safeguarding basic social principles in addition to its technical (economic, financial) responsibilities. Recognizing the combination of internal and external constraints that shape the regulatory process and outcomes echoes the growing consensus within the international development community regarding the role of institutions. The city case studies also show that where progress has been made towards achieving universal access and services that are sensitive to the needs and requirements of the poor, these were not achieved through regulation alone. Where significant pro-poor outcomes were observed, strong commitment of other influential stakeholders, notably political actors and proactive service providers, was also evident.

The case studies highlight the value of investing in institutional strengthening and capacity building. The Zambian experience is one example of successful international support to an LMIC water sector reform, where donor contributions were coordinated in such a way that an indigenous institution became empowered to assume responsibility for pro-poor sector development. The quality of personnel involved, their awareness of their own societies and their continuing exposure to international fora where these issues are continually raised, in addition to any formal institutional strengthening, must explain part of their leadership drive. The danger of leading too far ahead of general understanding, as demon-

strated by the politico-legal mandate short comings, is confirmed by the demise of the Bolivian regulator. Other regulators appear to be being allowed some latitude to date—it is possible to surmise that their political leaders, being exposed to the same international fora but with special ministerial meetings and discussions, are grateful to have some mechanism to implement the developing consensus on urban services.

5. CONCLUSIONS

In the "typical" LMIC, regulatory outcomes are very obviously shaped by the political context. Public and social service objectives, widespread poverty and intensifying scarcity of resources accentuate the interplay of technical and social—and therefore political—dimensions of water services. The transformation of the role of the State implicitly required for effective and efficient regulation has rarely been achieved. As a result, regulatory agencies in LMICs, born into delicate economic and institutional situations, operate in politically charged environments. An understanding of the regulator as a separate (not autonomous, rarely independent) "referee," balancing the decisions to be made within the particular socio-political context, and responsible for delivering an appropriate outcome, may be more suitable. The process of regulation, which involves many stakeholders, could then be more adequately described as a subtle, perhaps impossible, balancing act on the part of a regulatory agency to achieve the outputs desired by customers and society as against the inputs that customers and governments are willing to contribute. This implies the need for political leadership to recognize that the regulatory role requires a greater degree of personal leadership and discretion than is generally perceived reasonable in what is often presumed to be only an administrative, accounting-based tariff-setting process.

Nevertheless the research findings suggest that economic regulation of water services can be an effective mechanism for LMIC governments to institutionalize their commitment to universal service and consumer protection while also promoting incentives for efficiency and effectiveness. A clearer definition of a relevant and flexible universal service obligation, and the mandate to require service providers to achieve that USO, is a crucial regulatory tool and therefore a requirement for government policy. However, the extent to which benefits for vulnerable members of society can be realized depends on regulators themselves recognizing and addressing the realities faced by the poor. This has often been a step beyond their initial remit but, to their credit, this research suggests that many have indeed taken that step.

NOTES

1. In addition to its former sole primary duty of ensuring financeability, OFWAT was now also tasked with giving special regard to the interests of the disabled or chronically sick, pensioners, customers on low incomes and those living in rural areas (Water Act, 2003, Chapter 39, Section 2C).

2. Some cases revealed major uncertainties regarding water production and operational costs of utilities (e.g., Kenya, see Gerlach, 2008).

3. Note that vended water is still not recognized as an "improved source" by international agencies (WHO & UNICEF, 2008).

4. This can of course be partly explained by the fact that in many instances small-scale independent providers and resellers operate informally, if not illegally.

5. For example, the estimated turnover of Nairobi's resellers in 2005 was found to exceed utility collections from domestic connections by a factor of nine (Gerlach, 2008).

6. A note of caution: The lack of a proclaimed pro-poor mission does not necessarily indicate a lack of pro-poor intentions or vice versa. Where

a functioning regulatory process is backed by workable pro-poor policies the regulatory framework as a whole may become "pro-poor" by default.

7. High when compared with similar countries (Franceys, 2005).
8. They have since been replicated in Kenya.
9. While the figures previously reported by the Zambian Central Statistical Office were simply based on the "access to safe water" criterion (c.f. WHO & UNICEF, 2000), the coverage definition used under the regulator's information system "is based upon what should be considered an adequate and sustainable service level" (Anonymous, 2006, original

emphasis). Maximum allowable numbers of persons per water point are as follows: 5.5 per individual connection, 33 per communal tap, 600 per public tap and 1,800 per water kiosk.

10. Effectively halting new connections to customers with less economic (and political) power ensures that the revenue collected from higher-income customers paying a tariff equal to or above the volumetric charge levied by the provider balances the below-cost tariff charged to customers at the lower end of the market.

11. "Role model" OFWAT experienced this problem shortly after privatization, when high profits reported by the English and Welsh water companies caused public outcry (Young, 2001).

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