

Water and the urban poor

It is a Millennium Development Goal that the number of people without sustainable access to safe drinking water should be halved by 2015. But we are not on target to achieve this, particularly in sub-Saharan Africa and in impoverished settlements. This problem is urgent – so what is to be done? How can policymakers and regulators make it easier for poor people to access safe water?

Until about fifteen years ago most water supplies were provided at heavily subsidised rates by the state. However, in many developing countries the poorest and most isolated were not connected to the piped network, so did not benefit from subsidies. Many people therefore depended on small scale, often informal, private water sellers.

As part of the general drive towards pro-market reforms, privatisation of the water supply became widely prescribed. It was argued that the state was failing to do the job and that the private sector would be more efficient and so more able to invest in expansion that would benefit the poor. Furthermore water was to be regarded as an economic good that should be priced to reflect its cost because subsidies 'distort' the market and fail to encourage the efficient use of water. Also, less political interference was expected under privatisation making it easier to charge the higher prices needed for investment and to pursue non-payers. Surveys suggested that many poor people would be able to pay a commercial price for water services.

However, over the last decade experience has shown that this strategy does not necessarily lead to many more poor people having access to piped water. Although some networks have

been extended, privatisation does not seem to have helped many of the poor. Many families can still not afford to pay for connection and supplies. In fact private sector companies increasingly recognise that they cannot supply water to the poor without some form of subsidy, even in OECD countries. But there are many ways that subsidies can be created. What policymakers need to know is which will work best in their particular circumstances.

Water is a political issue

It is important to realise this is not merely a technical question. Water pricing is a political issue. Because of its vital role in promoting good health and reducing disease, an adequate level of water consumption benefits everyone. And because it is such an obvious basic need the state may well wish to ensure that everyone can afford it. Furthermore, since water supply networks are natural monopolies, market prices are likely to be higher than economically desirable so again the state may wish to intervene. Setting water prices is a tricky balancing act – juggling issues of economic efficiency, revenue raising, equity and fairness, income redistribution and water conservation within the confines of what the public will accept.

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In general, the way that public policies are created and implemented (or not) is affected by political preferences, pressure from the public and negotiations between organisations. These factors vary from country to country so policies cannot merely be imported from elsewhere and be expected to achieve identical results. Nevertheless there is much to be learned from others' experience so it makes sense to start by considering the kinds of subsidy systems that have been tried and their potential benefits and pitfalls. Unfortunately, little research has been done in this area. We hope that our investigations are only the beginning of a much greater effort to discover how to design subsidies so more poor people can access clean water.

Increasing block tariffs

A popular approach, this involves unit costs rising as more water is consumed. The result is that those who use relatively large quantities of water, such as industry and people with swimming pools and large gardens, help meet the costs of providing water to those who consume less. About 60% of South African consumers are supplied on this basis and 20 out of 32 water utilities surveyed in Asia used the method.

The size and price of the first block of water is very important. If it is too large then it will be less effective at targeting those most in need. But even block tariffs can be a considerable burden on the poor. In Cape Town the first 6 kilo litres (KL) per month are free and quantities up to 60 KL are charged on a sliding scale. This results in, for example, a household paying R212.40 for 60KL per month - a huge amount, enough for swimming pools, car washing and so on - and a township household paying R36.40 for 20KL. Although this is much less it is probably a much greater proportion of household income.

Higher prices for higher use can encourage conservation but of course this also means lower payments so less is available for redistribution. However the most serious problem for this strategy is that it requires household connections and water meters. In many situations this is impossible - either the poor do not have an on-site supply or meters are too expensive. Furthermore, when poor households do not have their own supply, they often buy from neighbours. If the neighbours end up paying at the higher rate because more is being consumed through their connection then block tariffs can end up hurting the very people they aim to help.

Flat rate tariff

This kind of subsidy involves the regulator requiring all customers to be supplied at the same price. This results in those who are expensive to supply being subsidised by those who are cheap and can be suitable when some low-income groups are difficult to reach. However considerable resources are required and some of those who benefit could afford to pay more. The risk is that, without this income, investment will suffer and the network will not be extended, resulting once again in it being the better off who benefit from the lower cost water including, possibly, subsidies.

Targeting the needy

Instead of making subsidised water available to all through lower prices the regulator may decide to target the most needy. There are three ways of doing this. Certain categories of people, such as pensioners and students, can be chosen. However this is usually not considered accurate enough.



Alternatively, people in particularly poor areas may be selected for subsidies or individual households can be means-tested but such systems, especially the latter, are expensive to run and depend on capable institutions. Suitable eligibility criteria must be defined and a decision made on whether the water is to be free or provided at a reduced charge. Again this system requires direct supplies to each household if subsidies are to be targeted accurately.

Some argue that subsidies should only cover part of the cost so there are incentives to use water efficiently and so that people do not get into the habit of not paying. There may need to be a limit on how much water is subsidised to prevent it being sold on to (ineligible) neighbours. But what about those who cannot afford to pay anything for supplies? This is a real problem for regulators, especially given the public health implications. If

requiring payment means the poorest households build up arrears then subsequent disconnection may not be in the public interest and does not respect people's rights and basic needs.

Subsidising - connection or use?

Which should be subsidised - connection charges or costs of supply? Some argue it is best to subsidise the connection charges as they are relatively large and therefore difficult for the poor to save up for. In Argentina privatisation resulted in connection charges of US\$ 43-600, depending on the size and location of the property, plus a six-monthly charge of US\$ 6. Even after the connection charge was reduced by 30%, following discussions with the regulator, it was still too expensive for many residents. Eventually it was replaced with a universal service charge, currently US\$ 2-3 every two months for those with a water supply and double for those with both water and sewerage.

Community management

Growing in popularity, this involves the local community in providing and managing water services. Local managers may be more able to identify families in need of subsidies but, since such schemes are usually small scale, subsidies may involve the not-quite-so-poor subsidising the very poor. And research indicates that some families will still be unable to afford the regular financial commitment so will continue to buy water at higher prices. Such families are also unlikely to be on the community management committees so have no input into rulemaking.

Reducing the need for subsidies

Recognising the difficulties that the very poor have in saving, some providers use flexible payment systems which can handle weekly or even daily payments. Meters can also be linked to systems of prepayment as well as delivering a certain quantity of free or subsidised

water. However meters may force the poor to cut their consumption – a cholera outbreak in Kwa-Zulu Natal may have arisen from residents with pre-paid meters turning to untreated sources instead. Also meters are not always reliable; they can break down and they can be manipulated.

Micro-credit has been used to help with connection charges and subsequent improvements. In El Alto, Bolivia, loans of US\$ 500 at 14% annual interest over five years were available to fund bathrooms. In Windhoek, Namibia, households worked together to reduce connection costs by installing the infrastructure themselves. They bought land with standpipes and block toilets and upgraded when they could afford it.

Informal subsidies

There are lots of ways to use 'informal subsidies' to get round the system. People can connect to the water supply illegally. Others find ways to falsify meter readings. Some fail to pay their bills and, in some places, can be fairly confident they won't be disconnected. In Stutterheim, South Africa only 28% of low-income households pay their bills.

Privatisation and a greater emphasis on cost recovery have led to attempts to reduce non-payment but it is not clear how successful these have been. Community management schemes can also have trouble collecting payments and cutting supplies off can encourage people to reconnect illegally as in South Africa where a market in illegal reconnections exists.

How to finance subsidies?

This can be done two ways. Either the subsidies go direct to the chosen consumers or they are sent to the water company for it to allocate through reducing prices to targeted customers. The former cannot be done without a benefit system and also risks the money being used for other purposes and less water being used than is desirable for public health reasons. Therefore the second method is recommended.

Cross subsidies, where better off users subsidise the less well off, are popular. The cost to higher income consumers can be capped at a certain percentage of their bills with any further money needed coming from government budgets. This type of cross subsidy means that supply areas need to include richer customers. Subsidies can work to reduce connection charges, with some of the costs passed on to regular payments such as service charges.

Water for Squatters in Metro Manila, Philippines

In Metro Manila privatised water services have not only led to lower tariffs but also to improved access to water for the poor. Given that many privatisation schemes have failed to achieve this we asked how the market had worked in this case.

In Metro Manila rising block tariffs are used to help those who consume less water. But of course this is only available to those with their own connections whose use of water can be metered. Prior to privatisation, in the large, impoverished squatter communities only public taps were provided for those who could not meet the legal residence requirements. Illegal connections were widespread so much of the water that was piped into these areas counted as Non Revenue Water (NRW) i.e. no income was received from it.

The two private water suppliers faced financial penalties if they failed to reduce the amount of NRW. This gave them the incentive to find ways to actively bring poor families into the network. So they decided to find ways around the rule that people must prove their residence was legal. The companies reckoned that it would make more sense financially to connect and charge such people than exclude them. In this case the market imperative (of maximising revenue) coincided with better access to water for the poor.

The companies targeted the poor squatter communities where illegal connections abounded. They offered the highest level of subsidy and worked intensively with local People's Organisations and local councils to organise enforcement mechanisms. One company offered householders a choice between having their own connection or sharing metered connections with a group of households. Using these methods the two companies have provided clean water to about 1.2 million more people since 1998.

Assessing subsidy schemes

When evaluating subsidies some key questions need to be asked. Firstly, who is included and how many people are included who should not be? For example, a low charge for the first block of water used benefits everyone, not just the poor. But this may be preferable to undertaking expensive targeting operations. Secondly, how many people ought to get the subsidy but in fact do not receive it? Complicated targeting systems risk missing people out, especially given that many people move in and out of poverty. Even well planned targeting may involve a high failure rate over time.

Thirdly, how predictable is the size of water bills, both for individuals and for industry? And does the method used reduce distortions – for example, is water being wasted because it is provided free of charge? Are fiscal and administrative costs kept to a minimum? The Chilean system, for example, requires that no household pay more than five percent of its income in water and sewerage charges. This entitlement has to be reviewed every three years and subsidised consumption is limited even for the poorest. It is an expensive scheme to run, depending as it does on household water being metered and households being means tested. But costs are reduced because the same means testing process is used for a range of state benefits.

Conclusion

Decisions on who gets what basic service, who doesn't, and why, are political decisions. Policies and regulation are critical in determining access, affordability and quality. Prices for water are managed prices which relate only partly to costs and cost recovery objectives - social, public health and environmental objectives also have an influence.

It is now widely recognised that, to ensure the poorest have access to water, subsidies are needed. Water is critically important for poverty reduction. Adequate supplies mean less time spent collecting water, less money spent on water so more available for food and other essentials, less disease and additional livelihood opportunities. Although many countries cannot afford comprehensive social protection for the poorest, access to basic services such as water is essential for equitable development.

But more work is needed to discover the best ways to deliver subsidies in different contexts. How can the poor be targeted with or without piped services to the home? How should water subsidies recognise water's essential contribution to human life and the scarcity associated with it? How should water subsidies be financed with or without the possibility of a cross subsidy? These are questions we urgently need to explore further if we are to halve the number of people without safe drinking water by 2015 as we have promised to do.

Paying for Free Basic Water in South Africa?

Apartheid South Africa had a three-tier system of providing water. White towns received a heavily subsidised full service. Black townships had yard taps to individual homes and simple waterborne sanitation. A flat rate was paid for all municipal services which included water. In trust areas (the former homeland areas) there were free communal standpipes and many people used rivers and streams. Nearly 14m people had no access to safe, clean water.

In the first years of democracy two million extra water connections were established. But, as the ANC became increasingly influenced by pro-market ideas, there was a move away from redistribution towards the current model which tries to address issues of equity but also aims to recover costs.

As an example of how the system works, consider the white town of Nelspruit which, after the 1994 elections, was amalgamated with the surrounding townships and trust areas. The population increased ten times but tax revenues rose by only 38% due to high unemployment in the township and trust areas. Lacking the capital to cope with the massive expansion of the water supply that was needed, the new council welcomed the opportunity to involve the private sector. The Greater Nelspruit Utility Company (GNUC) won a 30-year contract to supply water. Following further boundary changes in 2000, Nelspruit TLC became Mbombela, a much larger area, half of which continued to have its water supplied by the council.

Initially, targeted means-tested vouchers allowed poor households to access 19KL of free water a month. But this involved a huge administrative

burden, take-up was low and non-payment in the townships remained a serious problem. Disconnections were widespread. Mbombela initially welcomed the government's decision to make Free Basic Water (FBW) available to all – this policy enabled local councils to provide up to 6KL of water free to each household every month. But rather than improving, payment levels got even worse and, instead of the expected 18% return on its investment, GNUC incurred substantial and rising debts despite increasing its prices several times. Believing disconnection was now unconstitutional, GNUC tried to counter non-payment by installing devices that reduced water flow to a trickle – but this sometimes failed as people simply removed the devices or found other ways to access more water.

Why was non-payment still so high, and in fact increasing, after FBW was introduced? In the time of apartheid, refusal to pay for municipal services was an important part of ANC campaigning. Is the continuing refusal to pay under a democratic government just a hangover from this period? Our research suggested a number of factors contributed to a culture of it being normal not to pay service bills. Because townships previously had a flat rate system people were not used to prioritising, budgeting and managing household finances. Some respondents cited opposition to privatisation as a reason for non-payment. Others were protesting at GNUC's earlier credit control measures which had included cutting people off from water in the heart of a cholera epidemic. There was confusion about what FBW meant because of the way it had been promoted. Some people had thought all water would become free and some had stopped paying bills in anticipation

of this. Some, especially those living on higher ground, said they paid only part of their bills because the water supply was not always available. There was mistrust of meters and the billing system and indeed, in the early days of FBW, incorrect bills had been sent out. There was also a lack of political will to enforce payment.

But was affordability also an issue? Because FBW was inadequately funded, prices increased. After the first 6KL of free water an increasing block tariff was in operation so water became more expensive the more was used. Those using between 6 and 12KL per month saw an 8% increase in prices but between 12 and 18KL prices rose by 58% and between 18 and 30KL, by 98%. GNUC estimates average water use in the townships at 12KL – so many people must use more than this.

These price rises meant that families had to be very careful, especially not to exceed 12KL. However, many people told us they did not understand how to read their meters. And the water bills did not help – they did not show how much water above 6KL had been used or what tariff band it fell into. Of the 16 township households we interviewed only three (all in the highest income group) understood how to read their meters, regularly did so and tried to conserve water. We also found that the poorer households we interviewed had large water debts and some had been forced to sign crippling repayment schedules. They said that it was impossible to deny neighbours the use of their yard tap – water supply managers suggested that in fact they sold water but all adamantly denied this. We concluded that, although there was a culture of non-payment, inability to pay was also a problem for many poor people.

This CRC Policy Brief draws heavily on the CRC Working Papers below:

No. 37 Mitlin, D. *Competition, Regulation and the Urban Poor: A Case Study of Water* 2002

No. 93 Mitlin, D. *Beyond Second Best: The Whys, Hows and Wherefores of Water Subsidies* 2004

No 112 Brown, J. *Water Service Subsidies and the Poor: A Case Study of Greater Nelspruit Utility Company, Mbombela Municipality, South Africa* 2005

No 117 Lee, C. *Water Tariff and Development: The Case of Malaysia* 2005

No 123 Fabella, R. *Shifting the Boundary of the State; The Privatization and Regulation of Water Service in Metropolitan Manila*, 2006

Which are available on the CRC web site at:

http://www.competition-regulation.org.uk/publications/working_papers/

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