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Agenda

Advancing economics in business

Regulation: if it ain't broke, why fix it?

As part of its 'future price limits' project, Ofwat, the economic regulator for the water and sewerage sector in England and Wales, is considering how its approach to regulation might need to change going forward. Cathryn Ross, Director of Markets and Economics at Ofwat, discusses the challenges facing the sector, whether the current regime is capable of meeting these challenges, and future options for reform

Privatisation and regulation of the water and sewerage industry in England and Wales has been a success story. In the 21 years since privatisation, the sector has delivered huge improvements in service for customers and in environmental standards. There has been nearly £90 billion of investment. This has in turn brought real improvements in service standards, for example by reducing leakage by more than a third compared with its peak in the mid-1990s. Environmental standards have also improved, with more than 98.6% of bathing waters in England and Wales now complying with EU standards.[1] Drinking water quality has improved too, with 99.95% compliance with tough EU standards.[2] Customer service levels have improved vastly, and economic regulation has delivered bills around a third lower than they would otherwise have been.

At first sight then, it is hard to see the case for change in water and sewerage regulation. But look into the future and the picture is more worrying. The future will bring major challenges for the sector. The UK's population is projected to hit around 70m by 2030, and the concentration in the south-east of England—where there is already less water per person than there is in the Sudan or Syria—looks set to rise.[3] Lifestyle changes mean a greater number of single-occupancy households, with proportionally higher water consumption. Tougher environmental standards—notably through the EU Water Framework Directive—could require major expenditure. The effects that climate change will bring are unknown, but it seems likely that weather will become more extreme—more flooding, more droughts—and less predictable. Moreover, changes globally mean that our current consumption of embedded water (ie, water hidden in the goods we consume)—which for the average person in Britain is more than 3,400 litres per day[4]—is looking less and less viable. All this against the backdrop of rising consumer expectations about service standards and availability.

In Ofwat's strategy we have set out our vision of sustainable water—water and sewerage services that are financially, socially and environmentally sustainable over the long term.[5] If we carry on doing what we have always done, will the sectors deliver that vision in the face of the challenges of the future? Here I consider three key themes: information, incentives, and better, smarter regulation.

Information

Many people are surprised when they learn that society does not currently value water. The price that people pay for what comes out of their tap reflects (broadly) the cost of abstracting it from the environment, of treating and transporting it, and retailing it. But no one pays for the liquid itself. While it may be tempting to take the view that this is entirely appropriate given that water just 'falls from the sky', the absence of a value of water is a fundamental problem.

The fact is that, depending on time and location, water is a more or less scarce resource. Without a value of water that reflects this relative scarcity, those who use water have no way of understanding its true cost, and no incentive to use it wisely—that is, where and when the value they put on it equals or exceeds the real cost. Similarly, water companies do not have the basis on which to make efficient decisions about investment, especially in storage and interconnection.

In addition, the absence of a value of water means that when water is present at the 'wrong' place or at the 'wrong' time, it is viewed as a problem to be got rid of, rather than as an asset to be collected and stored.

The lack of a value of water means that companies simply cannot supply water or sewerage services efficiently. They do not have the information to do so. This is why we are keen to encourage greater water trading. The process of water trading will help to reveal the relative value of water in different places and at different times. Trading also provides the means for companies to respond to those price signals, moving towards more efficient allocation of water resources. In our recent focus report, 'Valuing Water', we set out a possible model of water trading, which we could develop through our price controls.[6]

While usually sympathetic in principle, people often express concern that moving towards valuing water will mean higher bills for end-customers. This need not be the case.

We need to remember, first, that we can incentivise efficient resource use by revealing relative values at the margin. The average price need not change. Second, resource use occurs at different stages of the value chain. Largely invisible in the black boxes of the vertically integrated monopolists are retail businesses, which (implicitly) buy water from wholesale suppliers. With retail separation, this transaction becomes visible. With price control separation, Ofwat can incentivise retail and wholesale businesses separately. Through the regulation of wholesale prices we can expose the retail business to marginal price signals. Through our regulation at the wholesale level, we can allow companies to profit from trading while sharing the value created with customers. Regulation at the retail level can limit end-customers' exposure to locational and temporal resource price signals, while the exposure of the retail business to these signals will incentivise it to procure and manage resources efficiently.

Incentives

Information is necessary but not sufficient for efficient decision-making. To respond efficiently to information, companies must face incentives to do so. Incentives are an economic regulator's core business. If we are to achieve our vision of sustainable water, we must use incentives that are effective and efficient. Markets and economic regulation are different ways in which firms are incentivised.

In competitive markets, the need to win and retain customers drives companies to provide what customers want and need, all at a price that those customers are willing to pay. By seeking out efficiencies, firms gain competitive advantage. Markets reveal information, they provide a means by which buyers and sellers can respond to that information, and they provide the incentive for them to do so efficiently. Ofwat supports the conclusions of the Cave review on competition and innovation in the water and sewerage sector; namely, that markets should play a greater role in the delivery of water and sewerage services, especially in relation to resources and at the retail level.[7] Where markets are developing, we must take care to regulate in ways that facilitate and encourage this.

Without competition—and parts of the water and sewerage value chain are naturally monopolistic—economic regulation mimics its effects by driving efficiency.

If we are to use incentive tools that are efficient and effective, we must understand the 'transmission mechanism'—the process by which regulatory incentives provoke behaviour by companies, that results in real-world outcomes.

It is clear that water companies' responses to our incentives depend on how they understand the 'rules', and how they expect us to apply them. At our recent 'Sustainable Water' event,[8] companies suggested that they discount the size of the reward or penalty according to their ability to predict whether they will receive it. In our recent discussion paper on the role and design of incentives, we list 26 incentive tools that we currently use in regulating the sector.[9] Would we be able to increase the effectiveness of our incentives by making them simpler?

Companies also tell us that incentives from elsewhere are important in driving their behaviour, for example the need to comply with environmental and drinking water standards, or the desire to benefit from schemes designed to promote renewable energy. Do our incentives combine with incentives from elsewhere in ways that help or hinder the delivery of desirable outcomes?

One specific area in which we need a better understanding of the transmission mechanism is the 'CAPEX bias'. Companies tell us that the fact that we allow a return on CAPEX but not on OPEX, coupled with the retention of OPEX efficiency savings for just five years, leads them to favour CAPEX solutions. This may be the case. But there are other factors at play too. To what extent does companies' risk aversion (which may result from a public service ethos), and a tendency to equate ownership of assets with control, help to drive CAPEX spending? To what extent does company ownership and the interests of investors (some of whom value companies using metrics based on the regulatory capital value) help to drive CAPEX spending? Linked to this, are companies profit-maximising or risk-minimising? And to what extent does organisational structure—with capital programmes and operations handled by separate teams—hinder the consideration of CAPEX and OPEX solutions on a level playing field?

We also need to make better use of the incentive properties of the form of the price control itself. Incentives vary depending on the length of the price control period; whether it is price cap or rate of return; whether the control bites on total, average or marginal revenue; and how under- or outperformance is dealt with. Within the black box of the vertically integrated regional monopolies are different businesses, with quite different economics and different risk profiles. We could improve the effectiveness of our incentives by ensuring that the form of the price control better reflects these differences. Asset-intensive parts of the business, with long asset lives and a high degree of predictability, might benefit from longer control periods and greater protection of sunk costs. Other parts of the business, such as retail, might benefit from a different approach, perhaps more designed to stimulate product innovation. This suggests the need for a more disaggregated approach.[10] This in turn would also have the benefit of freeing up scope for consolidation at different stages of the value chain, potentially opening a further route for efficiency and value creation.

Better, smarter regulation

While information enables efficient decisions to be taken, and we use incentive tools to encourage this, we must also think about *how* we use those tools. Meeting the challenges of the future will require better and smarter regulation.

Over the last 21 years, as we have adapted the regulatory regime, our regulatory processes have become more complex. The data we have collected from companies has grown. We have set price limits, outputs and service standards and collected data from the companies to monitor their compliance with these. It is now time to step back and make sure that the information we collect is what we need to do our job effectively, and that we use that information in the most effective way.

Better and smarter regulation means a more risk-based approach. In respect of the price review, this could see us devote more time and effort to those areas that have a greater impact on bills. We could apply different degrees of scrutiny to company plans depending on the quality of the plan and the track record of the company (which could itself create incentives for ‘good behaviour’). We want to reduce the burden of regular reporting and do less ex ante compliance monitoring. We want to increase the onus on companies to satisfy themselves that they are compliant, providing appropriate assurance to us about how they have done so. We want to make more use of targeted proactive investigations into companies or across-the-board issues where we have concerns. We also want to make greater use of wider sources of market intelligence to inform our prioritisation and decision-making. Our forthcoming focus report, ‘Getting it Right for Customers’, will seek views on this approach.[11]

Companies have told us that, in general, they would welcome such an approach. To succeed, this approach will require significant cultural change within companies. They will no longer look to the regulator to prescribe behaviour and provide reassurance about their compliance. We need to be clear about what companies need to deliver, but it will increasingly be for companies to decide how best to deliver it. This should reduce the regulatory burden, and enable greater efficiency and innovation, but it will mean greater risk for the companies. We recognise that a risk-based approach will mean cultural change for Ofwat too.

Smarter regulation also means learning and adapting. We need to take a flexible approach, and be prepared to change what we do and how we do it in the light of market developments. With greater use of market mechanisms, we need to watch the development of competition and be prepared to roll back regulation where competition is, or is becoming, effective. We may also need to adapt our approach to reflect new technologies, or changes in the wider policy environment (eg, in relation to renewable energy). A more disaggregated approach to regulation—moving away from ‘one size fits all’—will help us to achieve this.

Finally, smarter regulation means taking advantage of new thinking. Behavioural economics, for example, can help us to understand better how consumers process information and make decisions. This could help us to identify different approaches to water efficiency and to affordability. It could also help to understand how consumers behave in competitive markets, so that we can regulate in ways that empower where possible and protect where necessary. We will be doing further work in these areas in the coming months.

Building on success…

So, the water and sewerage sector has been highly successful since privatisation. The regulatory regime ain’t broke. But the longer we delay the reforms that are needed to meet the challenges of the future, the greater the costs are likely to be and the greater the risk of failure.

Ofwat is one player among many in the water and sewerage sector. There are 22 incumbents, new entrants, and other regulators such as the Environment Agency and the Drinking Water Inspectorate. Defra is expected to publish a White Paper on the natural environment in spring 2011 and a further White Paper on water in June 2011. Customers and their representatives play an important part. We all need to work together to build on the successes of the past 21 years, and lay the foundations for a solid future. And we need to start now.[12]

Cathryn Ross

[1] Ofwat (2010), 'The Role and Design of Incentives for Regulating Monopoly Water and Sewerage Services in England and Wales—A Discussion Paper', October.
[2] Ibid.
[3] Waterwise, 'The Facts', available at: http://www.waterwise.org.uk/reducing_water_wastage_in_the_uk/the_facts/the_facts_about_saving_water.html.
[4] Waterwise, 'The Facts', available at: http://www.waterwise.org.uk/reducing_water_wastage_in_the_uk/the_facts/the_facts_about_saving_water.html.
[5] Ofwat (2010), 'Delivering Sustainable Water—Ofwat's Strategy: Water Today, Water Tomorrow', March.
[6] Ofwat (2010), 'Valuing Water—How Upstream Markets Could Deliver for Consumers and the Environment', focus report, July.
[7] Cave, M. (2009), 'Independent Review of Competition and Innovation in Water Markets: Final report', report by the independent Cave Review for Defra, April.
[8] Ofwat (2010), 'Sustainable Water', event, October 20th, Westminster. Presentations available at: http://www.ofwat.gov.uk/mediacentre/speeches/prs_pre_20101020sustainable.
[9] Ofwat (2010), 'The Role and Design of Incentives for Regulating Monopoly Water and Sewerage Services in England and Wales', discussion paper, October.
[10] See, for example, Ofwat (2010), 'The Form of the Price Control for Monopoly Water and Sewerage Services in England and Wales', discussion paper, October.
[11] Ofwat (2010), 'Getting it Right for Customers—How can we make Monopoly Water and Sewerage Companies more Accountable?', to be published on Ofwat's website in November.
[12] See http://www.ofwat.gov.uk/future/monopolies/fpl for details of the future price limits project, and for published and forthcoming discussion papers.