

PRIVATISATION - A HELP OR A HINDRANCE IN MANAGING WATER DEMAND?

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INTRODUCTION

In 1989, the water industry of England and Wales passed from public to private ownership. During the 1970s and 1980s the publicly owned water authorities suffered from under investment to the extent that aging pipes leaked and polluting discharges into the rivers and sea, and out-of-date and overloaded waste water treatment works were commonplace. Capital investment was dependent upon central government funding and the industry was always a prime target for government cutbacks; there being no votes in new sewers, compared to for example, new schools. The Conservative Government (1979-97) was a great believer in private ownership and during its eighteen year reign many state assets passed to the private sector as prime minister Thatcher sought to *roll back the frontiers of the state* by creating a share owning democracy.

Apart from some concerted efforts on leakage control in the 1980s the water industry has traditionally favoured a supply led approach to water resources management. It is only in the last few years that demand management has gained credence as a potential solution to keeping supply and demand in balance, primarily due to regulatory pressure, the growing awareness of environmental issues and the droughts of 1989-92 and 1995-96.

This paper sets out some of the consequences of privatising the water industry in England and Wales and discusses whether privatisation has been an advantage or disadvantage, in relation to the management of water demand.

BACKGROUND

A Local Government and water industry re-organisation in 1974 replaced the 100 water boards, 50 local council undertakings, 27 river authorities, 2 river conservancies, 1366 council sewerage undertakings and 7 joint sewerage undertakers with 10 regional water authorities in England and Wales. The thirty small and historically private water

companies (supply only) were unaffected. The new water authorities were based on river catchment areas and they had control over the water cycle from source to sea, including water supply, sewerage, flood prevention, river quality and sludge disposal. Such a structure allowed the water authorities to plan at a strategic level and better utilise water resources. The new European Water Directive (consultation draft issued in 1996) will instruct all European countries to plan and manage their catchments on this basis, so in many ways England and Wales (such a re-organisation did not take place in Scotland) were ahead of the times. What could not have been foreseen however, was that such a re-organisation, by greatly reducing the number of water and sewerage undertakings, would ease the path to privatisation some fifteen years later.

In 1989 the water authorities were privatised and renamed water companies. The total assets of the authorities (including reservoirs, pumping stations, treatment works, offices etc.) in addition to the management of those assets all passed into private ownership making this privatisation unique in comparison with other countries. The Government ensured that share sales were a huge success with the British public because they were guaranteed a quick return on their investment. It has been estimated that the net proceeds of the sale were £3.6 billion for assets estimated to be worth £34.5 billion (with the taxpayer picking up the cheque for the difference) [HMSO, 1992-93]. However, because water and sewerage services are essentially a monopoly there had to be regulation to protect the interests of consumers and the environment.

THE REGULATORS

The water industry of England and Wales is arguably one of the most heavily regulated industries in the world.

The Secretary of State for the Department of the Environment, Transport and the Regions is responsible for the regulatory framework for the water industry of England and Wales. There are two main regulators:

The Office of Water Services (Ofwat) - whose role is to ensure that the functions of a water company are properly financed and carried out.

The Environment Agency ('the Agency') - is responsible for the provision of water resources and the protection and enhancement of the natural environment.

THE REGULATORY AGENDA AND WATER RESOURCES

There has been a water abstraction licensing system in England and Wales since 1965. One of the problems with the catchment based water authorities was that they were in the position of adjudicating on their own licence applications, i.e. they were both poacher and gamekeeper. This manifested itself in other ways; they had powers to prosecute polluters, but rarely did so because the worst polluters were themselves.

The Environment Agency, with a duty to conserve, redistribute or otherwise augment water resources and to secure the proper use of those resources is now the independent abstraction licensing authority (HMSO, 1991). This gives the Agency the power to refuse applications for new resources if it considers that there has been insufficient progress in managing demand. The Agency is also in the process of agreeing to a water resources plan with each water company. Prior to 1989, opposition to new water resource schemes was left principally to well organised environmental pressure groups. The Agency, in seeking to strike a balance between the needs of the environment and the abstractor, currently believes that far more could and should be done to manage existing demands.

The Office of Water Services agrees to the price limits of water companies and protects consumer interests. To achieve this they are looking to the water companies to be more economical and efficient in carrying out their functions. Ofwat wants to see the least-cost option adopted by the water companies in maintaining the balance between supply and demand, with an expectation that the demand management options will receive a thorough consideration. In particular Ofwat has been a strong advocate of metering households (the proportion of

metered households has risen from 2.6 percent in 1992 to 9.2 percent in 1998).

THE CONSEQUENCES OF PRIVATISATION FOR DEMAND MANAGEMENT

The Number's Game and Restructuring

From 1991 to 1997 on average, the water companies have reduced their staffing levels from 46,436 to 37,379 a reduction of around 20 percent. In some companies this reduction has been more severe, where up to 40 percent reductions have occurred (Water Service Assoc., 1991). The main driver for this has been the need to improve the company's performance indicators, many of which have number of employees as their denominator. The water companies would argue that this does not imply any loss of service since the former jobs of these employees are 'outsourced'. In many cases this has been accompanied by a loss of expertise and focus as the following example illustrates.

There is no history of water conservation in the UK, primarily because our appliances have always been to some extent 'efficient' (by US standards). Mains leakage, due to aging systems dating from the industrial revolution, however was recognised as a problem. In the 1980s with system leakage at around 30 percent or higher many water authorities started to address the problem by better monitoring and employing inspectors to find leaks. As privatisation approached staff employed on leakage control were easy targets for the next round of job cuts, as the consequences of such actions would not be felt immediately; a case of classic short-termism. Unsurprisingly, continual reductions in staffing levels and uncertainty over the future have severely affected morale in the water companies.

Much of this has been allied to restructuring in the water companies to yield 'business efficiencies'. Often this has resulted in staff being even more remote from the communities they serve. This is particularly important in relation to water conservation activity, where a good relationship with the community is considered a pre-requisite for success.

The Financial Profit Motive

A private company's first duty is to provide its shareholders with a financial return. Although companies may talk about their 'stakeholders' (shareholders, customers, community and environment) the reality is that

the shareholders are the main concern. Ideally the financial profit motive would be aligned with the best interests of the four stakeholders. Evidence to the fact that this alignment has not taken place is the detailed and frequent regulatory intervention into water company activities. This is not entirely the fault of water companies. The current regulatory regime, allows companies to increase their charges by $RPI \pm K$ where RPI is the Retail Price Index and K is a capital allowance determined by investment need. In the case of water resource investment, assuming the water company can convince Ofwat of the need for a new water resource development, this is “allowed for” in K and the company is guaranteed a rate of return on that investment. The alternative to water resource development, demand management and water conservation, does not receive the same consideration. The situation at present is that the cost of meter installations may be ‘awarded’ in K (to be determined later this year) but it is expected that any other water conservation activity will have to be financed from the company’s revenue. There is no financial incentive for the water companies to actively manage their demand. So it seems reasonable to conclude that what is arguably in the best interests of three of the stakeholders (community, customers, and environment) is in direct conflict with the interests of the most important stakeholder, the shareholders.

This dilemma is recognised by Mark Clifton writing in the water industry’s weekly magazine, *Water* (Clifton, 1997):

Since companies have a duty to promote water efficiency to all their customers, it would be inappropriate to subject them to a price control that gave them incentives to expand demand. In other regulated industries, however, price control formulae have been deliberately modified to give companies a positive incentive to reduce demand. For example, in electricity and gas, some price controls have been changed from controls on the average revenue per unit of energy supplied to controls on total revenue. Once revenue is fixed, such companies can increase profits by reducing demand (and hence costs). Given stronger incentives through the price control formula to reduce demand, water companies may be more willing to press ahead with seasonal tariffs and other innovative ideas sought by Ofwat.

Customer Relations and Public Perception

The public water authorities were not loved, but neither were they particularly disliked. They were seen as

beauracratc and inefficient, and a place where a job was ‘for life’. Despite the success of the share sale the British people have difficulty accepting the concept of profit being made out of collecting and distributing water. Since privatisation, year-on-year water company profits have soared, as have executive salaries. The greater dividends paid to shareholders seem to be at the expense of operational maintenance, particularly leakage control in the early years. The public resents this primarily because they see the water industry as a monopoly not subject to normal business risk. The consequence of this has been a deteriorating relationship (although this is variable across the companies) between company and customer.

Nowhere was this better illustrated than in the drought of 1995. Yorkshire Water, from being initially complacent, found their water resources being rapidly depleted in the western part of their service area. Requests by the company to conserve water were ignored by an angry public who believed the situation was caused not by the weather but by management ineptitude. Suggestions that the public might have to face rota-cuts were met with outrage and employees were advised not to go in public places wearing uniform for fear of being attacked. Eventually Yorkshire Water ruled out rota-cuts as an acceptable option, and maintained the supply by using 700 road tankers to transfer water to an empty reservoir (Independent Commission of Inquiry, 1996).

There is a feeling that generally the public are less prepared to respond to reduce water use and are not so accepting of restrictions (e.g. hosepipe bans) in droughts. In part this is due to the fact that bills have risen (to pay for the under investment of the past) faster than inflation and the public’s expectations of the service they receive have risen. They are no longer prepared to accept the inefficiency expected of a public service.

Some of the water companies view this change in perception as the call to build in large margins of supply over demand. They believe that all forms of restriction should be avoided, because this is what the customer expects. In 1997, the Managing Director of Severn Trent Water stated (Duckworth, 1997):

I’m not here today to advocate hosepipe bans. Indeed, I have been saying for over two years that such a term should be banned from our dictionaries and no company should ever, in the future, have to resort to such a measure. We are all in the customer service business and none of our customers want bans...We are in the water supply business - not in the water restriction business....

We know what our customers want and I believe we are in the business to give them what they need, whenever they need it.

As a result, the water companies have been extremely uncomfortable with the idea of working with their customers in finding a solution to the supply-demand problem that does not involve the provision of additional resources. The following two comments are representative of many of the water companies views on the idea of entering the customer's home to carry out water conservation audits and retrofits:

The adoption of a retrofitting policy would be promoting a policy of enforcement and confrontation with our customers [National River Authority (1997)] (Thames Water).

We are keen to encourage the voluntary adoption by customers of more efficient washing machines, low flush WC's and other water saving devices. But a more pro-active approach, as is adopted in parts of America, is probably too intrusive for our customers [Derwent, 1996] (Southern Water).

However, in recent years more progressive companies have been conducting pilot studies of water conservation programs to assess costs and water savings of different approaches. Almost without exception the response to these studies has been positive, with willingness to participate as high from unmetered as metered customers, so financial savings are clearly not the only incentive. This is beginning to be recognised by the water companies themselves:

Customers are asking us to help them save water, and this is a challenge for us, the water industry is not used to dealing with people's behavioural changes [Smith, 1998] (Anglian Water).

Water conservation programs are an opportunity for the water companies to build bridges with their customers and enhance their public relations image and environmental credentials in the process. Far from it being a policy of confrontation, it is the author's contention that water conservation programs provide an open door to better customer relations.

It is interesting to speculate on how water conservation programs would have fared under the previous public ownership regime. It is probable that the authorities would have been more willing to approach their customers, due

to the lack of resentment, but it is easy to imagine them developing a paternalistic approach. Such an approach would not be acceptable under the current privatised regime: companies and their customers need and are seeking a more balanced relationship.

Regulatory Pressures - All Sticks and No Carrots

The consensus view held by water conservation professionals seems to be that a combination of carrots and sticks will work best (with customers) in attempting to achieve a conservation goal. This philosophy of approach is not apparent in the regulatory regime where it might be surmised that the same combination would be the most successful in directing water companies towards water conservation options. It has already been mentioned that the regulatory regime offers very little in the way of financial incentives for water companies to pursue the demand management options. There may be an absence of carrots, but there has been no shortage of sticks:

- In 1991 and 1993 Ofwat set out that their vision of charging was one where customers would pay the full economic cost of the water they use. Although Ofwat could not enforce this it was clear that they would look unfavourably on companies with little or no interest in metering [Office of Water Services (1991, 1993)];
- In 1992 the National Rivers Authority (a predecessor body to the Environment Agency) declared that abstraction licenses would not be granted for new sources unless adequate consideration had been given to leakage control and metering (National Rivers Authority, 1992);
- In 1994 the National Rivers Authority set out a vision of demand management being a key component of its National Water Resources Strategy (National Rivers Authority, 1994);
- In 1995 the companies were given a duty to promote water efficiency on behalf of their customers – this has manifested itself in a water efficiency plan that had to be submitted to Ofwat. Progress against the plan is checked annually (HMSO, 1995);

- In 1997 the new Labour Government, within three weeks of taking office held a water summit declaring, amongst other things, that (Environment Agency, 1997):
 - water companies will be given mandatory leakage targets
 - water companies will offer a free supply pipe leakage detection and repair service for their customers
 - water companies must carry out with vigour, imagination and enthusiasm their water efficiency duty

This approach has to some extent been successful. In the five years from 1994 to 1998, the threat of and then the targets themselves have been largely responsible for a reduction in leakage from 5,112 cubic meters per day (m^3/day) in 1994/95 to 3,981 m^3/day in 1997/98 (Office of Water Service, 1996/97 - 1997/98). In addition regulatory pressure and persuasive and coherent argument has been helpful in starting to change the culture in water companies to take water conservation seriously. However, the water efficiency plans both in content and action have been somewhat disappointing. For most companies the following represent the sum total of the content: leakage control, metering, toilet cistern displacement devices and leaflets. Noticeably absent in most plans is innovative thinking; the approach to the plan does not seem to be “what can we achieve in terms of water saving?”, but “what is the minimum that we have to do to keep the regulators off our backs”. It is the author’s contention that the regulatory regime, if it wants to encourage cost effective water conservation and demand management policies, needs to find a more balanced approach with respect to carrots and sticks.

Transparency

A by-product of regulation has been transparency. Considerable amounts of data now enter the public domain, such as leakage figures, per capita consumption figures, demand forecasts, numbers of meters installed so it is possible for anyone to monitor demand trends for any company. Most of these data are published annually in Ofwat’s *Report on Leakage and Water Efficiency* based upon the mandatory *July return* all companies make to Ofwat. Opening up the industry to public scrutiny has been a very healthy development (Office of Water Service, 1996/97-1997/98).

Competition

Although water supply is a natural monopoly, which in the absence of true competition requires an economic regulator, it is likely that there will be increasingly more opportunities for competition in the future. The reasoning is that competition will bring efficiency and as a result reduce costs for the customer. At present competition takes two forms with a third under consideration:

a) Comparative Competition

Ofwat publishes ‘league tables’ of companies based on particular aspects of performance. For example, properties experiencing low pressure, speed of response to written complaints and leakage levels. Climbing up the league table is good for the company image, both as perceived by the City and the customer.

b) Inset Appointments

For large users (using more than 250 m^3/year) it is now possible for a third party to purchase water supply or sewerage services from the existing (incumbent) water company at a discount for onward sale to the customer. For the inset appointee and the customer to generate profit from this arrangement it is strongly in their interests to minimise the demand for water and sewerage.

It would appear that this represents an opportunity for water conservation. However, the threat of such appointments has resulted in water companies reducing their tariffs (rates) for their large customers. Twenty-two of the twenty-seven water companies now offer declining block tariffs to large users. Thackray (Environment Agency, 1999) estimated that the use of these tariffs could be leading to an increase of between 0 and 15 percent in non-household demand. The experience from the similarly privatised energy industry provides a reminder of the dangers of falling prices due to competition where by 1996, gas use had increased by 22 percent and electricity by 4 percent due to falling prices (Warren, 1996).

c) Common Carriage (under consideration)

Already in place in the gas and electricity industries “common carriage” is the shared use of the existing pipe network. This arrangement would give the customer a choice of supplier, without having to

physically move to another company's supply network. Those with an available supply of water would have the opportunity to offer that water to customers currently served by other suppliers. In 1996 the Department of the Environment issued a consultation paper and as yet there has been no movement to translate the principle into practical proposals (Department of Environment, 1996). The threat to water resources is clearly a lowering of the water price (where that price bears no relationship to the value of the resource) with a consequent increase in demand.

Another less noticed effect of the competitive environment has been the reduced collaboration between water companies. Original research is now something 'to sell' not 'to share' and this has been prevalent in the pilot water conservation study work that some companies are engaged

in. As a result the quality and quantity of debate about the appropriateness of different options is reduced.

SUMMARY: PRIVATISATION - A HELP OR HINDRANCE IN MANAGING WATER DEMAND?

As a summary of the previous discussion, the table below expresses the author's opinion on what has helped and what has hindered (or is likely to in future) the cause of water demand management in relation to privatisation of the water industry in England and Wales.

It is notable that the list of statements in the 'Helped' column does not necessarily require a privatised regime, but in England and Wales they have been an important consequence of that regime.

Helped	Hindered
<p>Strong regulatory environment (sticks)</p> <p>Better accountability of roles between regulated better division and regulator</p> <p>Transparency of information</p> <p>Comparative competition (league tables of leakage performance, per capita consumption etc.)</p>	<p>Lack of regulatory incentive (carrots)</p> <p>Short term and narrow financial thinking</p> <p>Manpower reductions</p> <p>Public antagonism towards companies</p> <p>Remoteness from customers, geographically and politically</p> <p>Inset appointments</p> <p>Common carriage</p>

CONCLUSIONS

The water companies are characterised by short-term thinking, prefer the large reservoir solution (with a guaranteed rate of return) and are disliked by their customers thus making partnership difficult. Further competition will result in a lower price for water ensuring that payback periods for water conservation measures lengthen to the extent that they may be shelved. The privatisation of former public service assets into shareholder ownership has introduced financial motivation, which does not coincide particularly well with the wider social and environmental objectives.

However, there is little doubt that the strong regulatory environment has stopped, in its tracks, the traditional 'predict and provide' approach, and by doing so has

forced demand management onto the agendas of water companies. The separation between water service operations and environmental/economic regulation has brought considerable clarity to balancing supply and demand in an environmentally sustainable manner.

Nevertheless, it is difficult to escape the conclusion that on balance, privatisation and the accompanying regulatory framework has not been of overall benefit in attempting to move England and Wales towards a more sustainable water resources policy.

Short Term Remedies

The author concludes that there are three necessary steps needed to ensure an environmentally sustainable water resources policy in the short to medium term:

1. Adjust the economic regulation so that water companies are allowed to include the cost of water conservation measures in price limits (if demonstrably cost effective compared to the alternatives). The regulation should also consider rewarding companies that produce “negalitres” (i.e. save water).
2. If competition is to proceed along the common carriage/inset appointment route it is essential that the full economic cost of water is charged to the customer (as stated in the draft European Water Directive). This means whatever the water company is able to reduce, it’s (financial) price to a surcharge would have to remain covering the environmental and social costs related to the abstraction and use of that water.
3. The water companies need to de-centralise their operations in an attempt to build local partnerships with their customers. By reducing leakage they have, to some extent, got their own house in order, now making collaborative water conservation approaches possible.

A Longer Term Vision

The above suggestions are no more than tinkering with the existing regime. A longer term vision would be to have the public fully embrace the concepts of sustainability, realising that a better environment and society, can in part, be attained by their own actions whether this be careful water use, cycling to work or buying goods with minimal packaging. We all need to recognise that a healthy environment is not the sole responsibility of local and national government. A precedent is being set in Phoenix Arizona where a ‘citizen’ approach focuses on the long term consequences to the community of water resource planning, encouraging partnership and shared responsibility (Babcock and Ploeser, 1998). This is being offered as an alternative to the traditional customer service model which concentrates on satisfaction of immediate desires and leaves the future to be planned by the water provider (as currently operates in England and Wales). The question is whether a ‘citizen’ approach promoted by a private company, motivated by financial profit is within the realms of possibility. At this juncture it seems unlikely.

Hence a longer-term vision would have to include the water utilities in some form of public ownership (but with

much more dynamism than the pre-1989 water authorities) which should bring a greater degree of accountability. The Utilities would then no longer be motivated by financial profit, but instead have as a mission statement the need to practice sustainable water management, providing the tools and advice for their customers to use water accordingly. In many households, the water meters so badly needed in the short to medium term, would no longer be required to act as blunt economic instruments, but as measuring devices to extend the public’s motivation far beyond saving money to living an environmentally sustainable lifestyle.

The views expressed in this paper are those of the author and not those of the Environment Agency.

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