

Options for structural change in the water industry to promote greater efficiency: looking beyond work on economies of scale



Introduction

There has been a continuing debate about the structural efficiency of the water and sewerage industry that has focused on the economies of scale that could exist if mergers between the current vertically integrated water companies were to be allowed. Perhaps this is inevitable when there is an automatic referral of all mergers where both parties' turnover is above £10 million. Perhaps also regulated companies may be expected to question how the comparative competition framework operates. And, of course, there are those who would suggest that the restriction on mergers leaves the United Kingdom without a 'national champion' and worse still makes the water industry vulnerable to foreign take-over.

But looking forward at an industry that will have to tackle the challenges of continuing improvement to the environment, growing concerns about the availability of water and a pressure to reduce carbon emissions, perhaps it is time to consider carefully whether, and if so in which activities, economies of scale may exist. Even were the existence of some economies of scale to become clear, this would not be an argument to allow mergers between the existing vertically integrated companies. Indeed, it could actually be an argument for a more radical structural overhaul of the industry. It is perhaps telling that whilst the largest companies in the United Kingdom are more than fifty times the size of the smallest, any relative scale advantages or disadvantages appear to be reflected neither in customers' bills nor levels of service.

The available evidence

There has been a number of academic papers, looking at both the British and overseas water industries, which conclude that the water industry does not exhibit economies of scale and indeed there may be diseconomies of scale. These studies have focused on water industries that maintain a vertically integrated structure. This is not surprising since water and sewerage companies in almost all countries are organised in this way. Moreover, it is not clear that there is sufficient reliable information about the true and/or proper costs of the different activities in the industry value chain to allow for a meaningful examination of the existence of economies of scale at the level of different activities.

The industry could look to the experience of the retail services joint venture between Wessex Water and Bristol Water. Both companies feel that this initiative has reduced costs by accessing economies of scale and reducing billing unit costs.

Similarly, the experience of the electricity industry could also be instructive. There has been a significant consolidation of the customer facing operations of the former public electricity supply businesses – suggesting that both investors and managers believe there to be economies of scale. Limited participation by new entrants would tend to confirm the existence of these economies of scale. Indeed, it is often now cited that serving a customer base of less than 5-7 million households is uneconomic.

Conversely, there are now more independent providers of power to the National Grid than at the time of privatisation. This suggests that there may be different scale pressures applying to retail services and to electricity generation.

There is some evidence that potential purchasers of water assets consider there to be economies of scale in the provision of capital. Examples would include the assets purchased by Veolia, and the pension fund investment in Anglian Water. This does not, however, appear necessarily to require joint operation or merger.

The water industry is often described as having very high fixed costs. This reflects the commitment of very high levels of capital expenditure consistent with the current incentive framework within which companies operate. In any capital-intensive business, one of the key questions is the extent to which a company can access/benefit from the theoretical capacity available.

The water industry builds assets that are designed to be able to cope with 'peak' demand and, by definition, there is consequently substantial underutilisation of capacity at 'non-peak' times. This underutilisation of capacity (for at least some of the time) applies to most parts of the water and sewerage value chain: water resources, water treatment, water distribution and the parallel functions on the waste water side. Customers could benefit if there could be better use of available capacity. This could suggest the existence of either economies of scale or potentially diseconomies of scale.

A way forward?

A number of separate initiatives may be required to ensure that customers get the best possible value for money and that appropriate solutions to the increasing environmental challenges are adopted.

1) Disaggregation of company cost information that takes account of where money is being and will be spent.

Regulatory price setting looks at the costs a company plans to incur over the next regulatory control period and allows for price caps that would allow an efficient company to finance its functions. In that sense it is forward-looking. Based on our experience in Scotland, most appears to relate to water or waste water treatment and the management of water resources and waste water discharges. This would suggest that the share of costs accounted for by network activities is rather less than is often suggested. An improved understanding of the detailed economics of activities is essential to achieving the maximum possible level of efficiency. It could also reveal whether, and if so in which activities, economies of scale may exist.

2) Remove the asymmetry of incentives that makes it more attractive for a company to build or extend an asset rather than, for example, to change operational practices.

Companies can currently improve shareholder returns by delivering the outputs agreed with the regulator for lower operating cost but this improvement is likely to be reflected in future regulatory price determinations. If, however, a company invests in a fixed asset, it is, effectively, guaranteed a return on that asset for the life of the asset. This imbalance will tend to favour capital-intensive solutions and limit some opportunities for economies of scale – for example strategic working with local authorities on dealing with drainage.

3) Introduce an incentive for companies to work jointly on fulfilling their remits.

Improved incentives for companies to work together may benefit both customers and the environment. For example, it is not clear that pricing bulk supplies at the large user tariff or placing an obligation on a company to give absolute priority to its own appointed areas is in the interests of either customers or the environment.

4) Introduce an incentive for customers to alter their demand profile if this could lower costs.

It is in the interests of both the customer and the environment that we consider carefully what services customers need and how they can be most efficiently delivered. In many cases implementing a change in a customer's behaviour could involve some transitional costs but bring substantial benefits to other customers and the environment over the medium term. It is important that customers should make some gain from 'doing the right thing'.

A WAY FORWARD?

5) Introduce a legal separation of companies' retail function and allow for mergers, disposals etc.

The competences required in a customer facing retail business are quite different to those required to deliver physical water and sewerage services. They are different in much the same way that other specialist retailers' competences differ from those of the producers of the goods that they sell.

6) Overhaul the information collected on water resources (and the parallel activities on the waste water side).

This should include reporting on abstractions that are managed jointly; the maximum resource available under each licence; and the maximum, minimum and daily average level of actual abstraction. At the current time there does not appear to be reliable information readily available on the level of water resources available. This information is clearly important to the trading of abstractions but more generally to ensuring that we make the most efficient use possible of those resources that are available. More generally, reporting local costs and distinguishing these from overheads such as coordination, and regional planning should assist us in understanding whether and where there are economies of scale in resource management, discharge management and network operation.

Conclusions

These six steps should assist in establishing whether, and if so in which activities, economies of scale may exist. They could also contribute to the creation of a level playing field for the industry and as such the encouragement of competition where this is to the benefit of customers and the environment.

New entrants would be encouraged where they can innovate and achieve competitive advantage. Existing companies could focus on activities that they do best and customers could increasingly be confident that companies are working in their interests and, if not, they would know that they could switch supplier.

To summarise, we do not yet know whether there are economies of scale in today's water industry – until there is structural reform we cannot reliably identify, measure or (more importantly) exploit any such savings.

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