8 How not to reorganise an industry: Privatisation, liberalisation and Scottish water

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Any industry requires two key elements if it is to operate efficiently and to serve its customers well. Experience shows that both are necessary in the 'network utilities' such as gas, electricity and water, as well as in other parts of the economy.

First, the market for the industry's products should be competitive. No supplier should have captive customers: anyone who is dissatisfied with his or her current supplier should have the ability to switch to alternative suppliers. In those circumstances, all suppliers are kept on their toes. They have powerful incentives not just to control current costs but to innovate in terms of prices and quality, so as to maintain or improve their future market positions. Moreover, because of market rivalry, cost reductions and the benefits of innovation tend to be passed on to consumers.

Second, companies in that industry should be held privately. If they are, competition in capital markets will mean that the company's shareholders will press its managers to perform efficiently, reinforcing the pressures from competitive product markets. Managers who do not respond risk losing their positions, because a falling share price will make the company a takeover target and a new management team may take their place.

In practice, markets – like all human institutions – work 'imperfectly'. Nevertheless, experiments with other forms of economic organisation – in particular establishing state corporations with monopolies of the products they sell in the belief that they will pursue the 'public interest' – demonstrate that such alternatives are inherently inferior to competitive markets with private ownership. Such enterprises have few, if any, incentives to operate efficiently, to innovate and to respond to the wishes of consumers. Managers cannot perform well in such circumstances, not necessarily because of the failings of individuals but because the system is at fault. Both economic principles and the lessons of history indicate that monopoly state corporations are doomed to failure.

This chapter examines the difficulties inherent in nationalised ownership of industries that produce goods and services for sale, discusses the problems specific to the Scottish water industry, compares these to the situation in England and Wales, and makes some proposals for improvement.[2]

Scotland's water

The previous observations about state corporations – gleaned from both theoretical observations and practical experience in Britain from the 1950s to 1980s – do not appear to have reached the authors of Scotland's water supply regime. When the Scottish water industry was reorganised in 2002, state ownership was maintained and its monopoly characteristics were reinforced. Three regional water companies, in east, west and north Scotland, were amalgamated to form Scottish Water (SW), a nationalised monopoly with a regulator, the Water Industry Commissioner for Scotland (WICS).[3]

SW is one of the Britain's larger companies in the water industry, with a turnover of about £1 billion a year and about 4000 employees. Because it is nationalised, it cannot be compared in terms of market value with the privatised water companies in England and Wales. However, Table 8.1 (which uses various physical size indicators to compare SW with the ten regional water and wastewater companies in England and Wales) shows that SW is bigger than any of the English and Welsh companies in terms of length of mains and

Table 8.1 **Scottish Water relative to water companies in England and Wales**

	Scottish Water	*Ranking relative to water and wastewater companies in E & W*
Length of water mains (km)	46,508	1
Length of main per property (m)	18.74	5
Length of sewers (km)	44,854	3
Length of sewer per property (m)	13.34	7
Number of water treatment works	371	1
Number of wastewater treatment works	616	4

Source: WICS (2004c)

number of water treatment works, and is ranked third by length of sewers.

Given the nature of the 2002 reorganisation, it is hardly surprising that it failed to stem the flow of public complaints about the industry. Criticism is rife in the Scottish media about SW's alleged inefficiency, its charges, its standards of service and more generally its apparent lack of concern for the interests of its consumers. New legislation passed by the Scottish Parliament in February 2005 – the Water Services etc (Scotland) Act[4] – made some significant changes to the industry and, in particular the way it is regulated, but the legislation does not address fundamental issues about the industry's ownership and structure.

Scottish Water: efficiency and standards of service

Some of the strongest criticisms on the state of the Scottish water industry have come from its 'economic' regulator, Alan Sutherland, who was the Water Industry Commissioner for Scotland before the 2005 Act. In a November 2004 report, WICS made an 'overall performance assessment' across a range of services and found that between 2002 and 2003, SW's standards of service were far worse than those in England and Wales (WICS 2004b, chapter 6). He ranked

SW's performance at a level of only 38 per cent of the worst-performing water company in England and Wales.

The comparison may seem unfair since SW was only formed in 2002 from its three predecessor bodies, and so had little time to reorganise. Moreover, SW has argued that the England and Wales industry surged ahead because of its big investment programme since privatisation (*Scotsman* 2004). However, as WICS points out, the 'asset bases either side of the border appear to have many similarities' and, in the last twenty years, investment per connected property in Scotland has matched that in England and Wales.

WICS therefore concluded that it is inefficiency in investment, not lack of investment funds, which distinguishes the Scottish water industry from its counterpart in England and Wales (WICS 2004c, 3–4). In his words, 'Customers in Scotland have paid for, and so deserve, an equivalent standard of service to that which customers in England and Wales receive' (ibid, 4.).

As explained below, efficiency comparisons between public- and private-sector water companies are fraught with difficulties, so there is room for argument about the size of the difference between SW and the companies in England and Wales. Nevertheless, there seems to be a significant lag in performance in Scotland.

Nationalisation may not be the only reason for this poor performance, but those familiar with the history of Britain's nationalised industries will find a familiar ring in the criticisms made of SW. They echo criticisms made of the 'public' corporations that were established just after World War II as part of Prime Minister Clement Attlee's nationalisation programme. Most of these corporations – including 'utilities' such as gas, water, electricity and telecommunications – subsequently were privatised in the 1980s and early 1990s. A few remain nationalised today, including the Post Office as well as Scottish Water.

Describing these nationalised corporations as 'public' bodies is misleading. 'National ownership' did not mean that the corporations were genuinely accountable to the public. Indeed, one of the main reasons for frustration with their performance was – and still is where such corporations remain – that the general public has no control over the activities of these organisations, and feels powerless to influence their behaviour. As explained below, such discontent is not so much the fault of particular individuals in particular organisations: it is an innate characteristic of a regime where nationalised corporations monopolise 'key' industries.

Seen in this light, one of the underlying reasons for the failings of Scottish Water becomes clearer: it is the result of political failure to establish appropriate ownership and structure, and an appropriate regulatory regime for the water industry in Scotland. Politicians created a nationalised monopoly, protected by statute from competition, in circumstances where such a form of organisation is ill-suited to the circumstances of the industry.

To consider remedies, we need to look to the past to evaluate why nationalised monopolies have so failed and why, in most British industries, state corporations no longer exist.

Nationalisation and its problems

The record of nationalisation

Nationalisation began with high hopes in the 1940s when Herbert Morrison, one of the 'founding fathers' of state ownership in the Attlee government, said that '…a public corporation gives us the best of both worlds' because it can '…combine modern business management with a proper degree of public accountability' (House of Commons 1946).

After a honeymoon period in the 1950s and early 1960s, public disillusionment with nationalisation grew. There were complaints of inefficiency, technological backwardness, lack of concern for consumers and poor industrial relations. Tensions between the Boards of the corporations and governments increased.

By the 1970s there was serious concern about the poor performance of Britain's nationalised industries, including utilities such as water, electricity, gas and telecommunications.[5]

After three decades of this poor performance, there were few who still subscribed to the idealised Morrisonian view of state corporations. Opinions about remedies varied, but the deficiencies of nationalisation were all too obvious.

A series of White Papers issued in 1961, 1967 and 1978 failed to bring about any improvement.[6] There were various attempts to impose some of the concepts of welfare economics on the industries – such as long run marginal cost pricing and test discount rates comparable to those used for low-risk private sector projects. Yet even these attempts foundered due to the sheer practical difficulties of implementing such ideas, and because of resistance from both politicians and the industries.

Most people would agree on some functions that must be performed or at least administered by government – defence and law and order, for instance. But, in the case of the British nationalised industries, governments strayed far outside these so-called 'public goods' into activities that are plainly commercial – where a product or service can be sold for a price to a willing buyer – and thus, there is no reason why the public sector should have replaced private enterprise in those activities.[7]

Problems inherent in nationalisation

Some of the problems that arose in the British nationalised corporations and that seem inherent in such a form of organisation are discussed below.

1. Ownership by no one and its consequences

One of the most serious ingrained problems in markets where there are state corporations is that citizens have virtually no means of influencing what those corporations do. 'Public' ownership in this sense is valueless because the 'owners' have no defined, transferable property rights in the organisation: in the well-known phrase, what is owned by everyone is perceived to be owned by no-one.[8] The 'agency' problem always exists when there is a divorce between an organisation's ownership and its management: the problem is maximised in the case of nationalised corporations. They have no shareholders other than government; they are immune to the pressures usually exerted by shareholders on management; and they cannot be taken over.

The owners of any company need means of monitoring and controlling the actions of the managers who are their agents: they do not want those managers to pursue their own interests but those of the owners. It is notoriously difficult, even under private ownership, to devise incentive structures (such as performance-related rewards) that align the interests of both owners and managers.

Nevertheless, shareholders in companies have the power of 'exit' as well as 'voice'. Complaints to managers or protests at Annual General Meetings may not be very effective, but the prospect of a plunging share price – as disgruntled shareholders 'exit' by selling their holdings in protest against underperforming managers – is a remarkably effective way of concentrating managers' minds. The wealth of managers who are shareholders will be reduced and, more important, the decline in the company's stock market value may make it a target for a potential bidder.

'Owners' of nationalised corporations lack the power of exit that private shareholders enjoy: they have no property rights to sell if they are dissatisfied with the state corporation's performance. Instead, they must rely on making their voices heard, principally through the politicians and civil servants who are the immediate principals of the state corporation management. Such indirect influence is highly unsatisfactory – unless one assumes that politicians and civil servants are altruistic, wise, well-informed individuals devoted to the interests of the community as a whole, and then further assumes that those interests can be discovered and pursued in some way other than through market processes (Robinson 2003).

Governments and government-appointed regulatory bodies cannot reasonably be assumed to be purely 'public-spirited'. As public choice theorists have pointed out (Buchanan 1978), one of the inconsistencies in mainstream economic theory is that it assumes people in the private sector pursue their own interests whereas people in the government sector pursue the public interest.

There seems no justification for this 'bifurcated man' assumption. More reasonably, one might assume that people are much the same wherever they work and that government sector employees are as likely to pursue self-interest as those in the private sector (Tullock 2000). Obviously, that assumption leads to quite different predictions of how those in the government sector will behave. In practice, it means not only do politicians and civil servants lack relevant information, they may have all manner of questionable objectives in mind for the corporations other than their being efficient and responsive to the wishes of citizens/customers.

2. Weak efficiency pressures

Given these agency problems, efficiency pressures on state-owned corporations are extremely weak. They are subject to monitoring by government departments but – in the absence of capital market comparisons – these departments have no way to determine how efficient the corporations are.

The problem is compounded if, as is often the case, the state corporation has a monopoly of the national product market. Private monopoly can be a problem but private companies that exploit their market power usually find that, in the course of time, rivals enter their market and compete away their profits. State monopolies are, however, protected by statute from entry. Consumers are captives, unable to exit from their existing supplier. There are no rivals to drive innovation, cost reduction, higher standards and lower prices. A government or a government-appointed regulator is unable to foresee what the outcome of a competitive market would have been: it has no relevant standard of comparison against which to judge the corporation and is forced to rely on unsatisfactory efficiency comparisons and efficiency audits.

3. Politicisation

Another serious issue in markets where there are state corporations is politicisation, which has implications for efficiency. Because politicians are likely to be held responsible for major, and sometimes minor decisions by state corporations, they tend constantly to interfere with decision-making. A common complaint from senior managers of the British nationalised corporations was that governments would not allow them to manage.

In the days of nationalised industries, governments would lean heavily on the nationalised corporations to pursue changing political objectives. They were both controlled and owned by the state. Nationalisation is a form of regulation but one without clear rules and predictable outcomes: the regulated company is usually subjected to backdoor pressure from politicians and civil servants. Before privatisation, the British nationalised industries were, at times, induced to keep their prices artificially low in order to make the general rate of inflation appear lower. At other times, they had to increase or to decrease investment, not according to the prospective rate of return on capital, but depending on the financial position of the government and whether it was seeking to boost or restrict the rate of economic growth.

Morrison believed that politicians and nationalised industry management could maintain an 'arm's length' relationship but, given the ill-defined responsibility governments had for the industries, the political interference that was so resented by management came not just at the 'macro' level as explained above, but in 'micro' detail. Managerial objectives were confused by doubts whether the industries should follow 'commercial' or 'public service' aims or simply do the bidding of the government of the day. By their actions, governments created severe regulatory uncertainty in the industries they controlled.

One consequence of nationalised ownership is that lobbying is rife. Management realises that their activities are affected at least as much by the actions of politicians and civil servants as by their own efforts to innovate and cut costs. Lobbying appears to be a relatively high-return activity into which corporate resources therefore inevitably flow, diverting scarce management resources away from innovation and efficiency improvement. Lobbying is, of course, present also in markets where there are no state corporations – but the relatively high returns which accrue to state corporations through lobbying activities means that it is innate in such organisations.

To summarise, in the case of monopoly state corporations, the absence of competitive market forces means that pressures on the corporations to increase efficiency and to pass gains on to consumers are very weak. Politicisation is rife and resources flow into lobbying. Attempts by governments and regulators to simulate the results of competitive pressures are a pale shadow of the real thing: in the absence of information from either capital markets or product markets, virtually all the facts required for meaningful efficiency comparisons are absent.

English, Welsh and Scottish water: problems of nationalised monopoly

The English and Welsh water industry was privatised in 1989. Ten large vertically-integrated water and sewerage companies were created in England and Wales (hereafter 'water companies') out of the previous river basin authorities, in addition to the 29 already privately-owned water-only companies. As with Britain's other privatised utilities, a regulatory office – the Office of Water Services (Ofwat) – was established to apply price cap controls, and water became subject to an environmental regulatory regime (now by the Environment Agency).

Privatisation has had numerous benefits. It has allowed businesses to raise capital without going to the government. The industry is regulated independently by Ofwat,[9] which has, as in other utilities, reduced the politicisation of decision-making that was a feature of state ownership. Incentive regulation has improved the efficiency of the water companies and regulation is generally recognised to be open and transparent (Mayer 2005). It can therefore be argued that water privatisation and regulation have been successful (Mayer 2005).

However, there are still many flaws in this privatised structure,

in which a number of regional monopolies are supervised by an 'economic' regulator, and environmental and quality regulators. Up to now, there has been very little competition (and that only for a few very large customers), and it is not clear that a new regime under the 2003 Water Act will be effective in liberalising the non-household market (Robinson 2004).

The regulator operates primarily by using 'yardstick' or 'comparative' competition to compare different companies: as explained below, that is not a very satisfactory basis. Other problems arise because existing companies have some protection from takeover (ibid.). To avoid reducing the number of 'comparators', a constraint has been placed on 'water-to-water' mergers. A water company in England and Wales that wants to take over another water company is automatically referred to the Competition Commission, and the Commission must consider the effect of the merger on Ofwat's ability to make comparisons. Such mergers have generally not been allowed and the market for corporate control has therefore been constrained.[10] The result is perverse since the reason for instituting comparative competition is the absence of real competition. But comparative competition then leads to the merger restriction which means that, not only is product market competition absent, but the capital market – normally a discipline on inefficient managers – does not work properly either.

Furthermore, a significant feature of the industry is that, as well as 'economic' regulation, water companies are subject to detailed environmental and quality regulation, both from the Environment Agency in Britain and from the European Union, which forms a very important part of the supervisory system as a whole. Indeed, EU directives on water quality have been responsible for most of the price increases since privatisation (Helm and Rajah 1994; *Financial Times* 2004). In general, the industry seems to suffer from too much regulation.

Despite some of the problems experienced in England and Wales, the industry has made some advances since privatisation (Mayer 2005) whereas Scottish Water still exists in a setting similar to that which formerly characterised the British nationalised sector as a whole. The deficiencies of that sector, described above, are all too easily recognisable in the water regime in Scotland as it has operated so far. There is 'public' ownership, so there are no shareholders with property rights and no share price. There is monopoly: Scottish Water has so far been the sole provider of water and waste water services in Scotland, so consumers have no choice. There is politicisation: the Executive Board of Scottish Water answers to the Scottish Parliament.

As well as this direct political control, Scottish Water is – like the privatised English and Welsh companies – subject to an 'economic' regulator (WICS, up to the 2005 Act, and now, the Water Industry Commission) which regulates charges and service standards. However, in a significant difference from England and Wales, before the 2005 Act the regulator worked as an adviser to Ministers. SW is also, like the industry in England and Wales, subject to numerous quality, environmental and health and safety regulators – in SW's case, these are the Drinking Water Quality Regulator, the Scottish Environmental Protection Agency and the Health and Safety Executive.

Politicians have not been shy of involving themselves in the company's business, as one would expect given the statutory position of Scottish Water and previous experience of nationalised corporations. The Water Industry (Scotland) Act 2002 permitted Scottish Ministers to give guidance to WICS about how he should perform his functions and Ministers set out guidelines for Scottish Water. In February 2005, for example, the Minister provided objectives for the water industry in Scotland from 2006 to 2014.[11]

The objectives told Scottish Water that it should not increase charges by more than the inflation rate between 2006 and 2010. In addition, various objectives were established relating *inter alia* to drinking water quality, environmental improvement, sewer flooding prevention, connection of new homes and the rebalancing of charges in favour of businesses. Scottish Water must draft a business plan to show how it will comply with the Ministers' demands. Plainly, once Ministers have stated their objectives, they

are bound to monitor Scottish Water's progress in achieving them and to exercise control when the company appears to be falling short. Thus the intervention in company decision-making that was formerly a common feature in British nationalised industries seems inevitable in the Scottish water industry.

The 'economic' regulator before the 2005 Act, WICS, lacked some of powers of Ofwat in England and Wales. WICS did not itself set charges as does Ofwat.[12] Its role was indirect, with principal duties including:

- to advise Ministers on the revenue required by Scottish Water to provide customers with a 'sustainable service' and to fund its investment programme;
- to consider and approve Scottish Water's annual scheme of charges (though with any disputes being referred to Ministers);
- to advise Ministers on Scottish Water's service standards and customer relations; and
- to advise Ministers, when requested, on a range of matters relating to Scottish Water's impact on customers.

Thus, its role was as Ministerial adviser rather than independent regulator. Furthermore, though there has been a move in Britain to remove competition policy from political control, before the 2005 Act disputes between WICS and SW were resolved by Ministers rather than being referred to the Competition Commission (as they would be in similar cases in England and Wales).

Although WICS said that there were safeguards for his independence of view and that he was not controlled by Ministers,[13] his position as adviser to Ministers was well out of line with the rest of the utility regime in Britain. That regime has three 'pillars' – regulatory offices independent of political control, competition promotion duties for the regulators and incentive-based price control of monopolies (Robinson and Marshall 2006). Before the 2005 Act, WICS lacked the first two of these, which are arguably the most important, and did not itself control the price cap.

Contemplating the Scottish water regime as a whole before the 2005 Act, it embodied most of the worst features of an old-style nationalised system in which politicians and civil servants attempt to run a major industry. Government controlled not just the general direction of the industry but also its charges and standards of service. The authors of that regime might have learned from decades of practical experience in Britain, as well as theoretical considerations, that the performance of nationalised corporations is not just an aberration from some much superior norm that can be achieved in the Scottish water industry.

Far from following the public interest, nationalised corporations have *inherent* undesirable characteristics: inefficiency, politicisation and disregard for the interests of their (captive) customers. Indeed, it is significant that WICS used the performance of the privatised industry in England and Wales as his standard of efficiency. One of WICS' objectives – to '…ensure that the level of customer service is on a par with the service delivered in England and Wales' (WICS 2004a, 13) – was an implicit admission that, in England and Wales, ownership, structure and regulatory regime combine to produce a superior performance.

Starting a revival? The 2005 Water Services Act

Some of the problems of the Scottish water industry, including the tensions in the relationship between WICS and Ministers, may be eased by the passage in February 2005 of the Water Services etc (Scotland) Act which, among other things, establishes a new Water Industry Commission which bears a closer resemblance to Ofwat. The Commission has powers to set charges (within policy guidelines from Ministers) and Scottish Water has a right of appeal to the Competition Commission against price determinations, thus bringing the Scottish regulatory system for water closer to that of England and Wales (Scottish Executive 2004; Water Services etc (Scotland) Bill 2005).

The new Act is both a recognition that up to now, the 2002 Act has created major problems in Scotland's water supply regime, and a first step along the road to correcting some of the errors of the past. It gives greater independence to the regulator and provides for limited competition for non–household consumers. But it is no more than an initial step. Fundamental difficulties remain – above all, that Scottish Water is still a nationalised corporation, subject to political pressures, with substantial monopoly power and poor incentives for management. Some specific problems – both of commission and of omission under the new regime – are discussed below.

The regulator gains considerably in independence from political control and the ability of Scottish Water to appeal against regulatory decisions to the Competition Commission is a step forward in reducing political influence. But, since Scottish Water remains in 'public' ownership, it is not clear to what extent the Scottish water industry has been freed from politicisation.

Although the new Water Industry Commission has the power to determine Scottish Water's charges, its freedom is bounded by constraints of 'principles' set out by Ministers about 'charge limits for different consumer groups' (Scottish Executive 2004, paras 3.5 and 3.6). In February 2005, the deputy environment Minister announced that the poorest households would be given a 25 per cent discount on their water charges. This will be paid for by abolishing the 25 per cent discount now enjoyed by those individuals who own more than one home. Such actions suggest that Ministers are pursuing distributional objectives through water pricing (*Scotsman* 2005).

Another problem is that in Scotland, SW does not charge consumers directly, thus reducing contact between supplier and customer. Charges are collected by local authorities and may thus impinge on their ability to collect council tax, increasing the risk that there will be political manipulation of water charges (*Edinburgh Evening News* 2005). Ministers also have a duty to provide Scottish Water with 'standards and objectives…in the provision of core services' (Scottish Executive 2004, para 3.4). Past experience of relations between Ministers and nationalised industries suggests that such provisions will still permit interference by Ministers who wish to do so.

Continued government ownership also means that there will be no efficiency pressures stemming from shareholders and that Scottish Water will remain outside the market for corporate control. The lack of capital market efficiency pressures is a serious matter, given the apparent inefficiency revealed by the regulator's studies.

Of course, if product market competition were to emerge, that would itself increase efficiency pressures and provide better incentives for managers, since competing companies would have an incentive to reduce their costs and to innovate. But the new Act goes so far as to prohibit competition for domestic consumers. Almost always and almost everywhere, politicians' bans on competition are an extremely bad idea.

The Act also rules out a common carriage system that might be another way to promote competition. Moreover, it gives Ministers a role in licensing entrants to the industry, permitting them to specify 'other factors' (other than those a regulator would normally take into account) in deciding whether an applicant is suitable – a provision which clearly could be abused.

An innovation in the legislation is the possibility of competition for larger consumers between entrants and a new 'arms-length' subsidiary of Scottish Water. SW would not be allowed to discriminate in favour of this subsidiary and against entrants. Licensed entrants would seek water supplies from Scottish Water which, if agreement was reached, would supply water to the customer through the 'public' supply system.

Unfortunately, however, this 'competitive' regime – like its counterpart in England and Wales, under the 2003 Water Act – seems likely to experience the problems that usually plague regulated access systems (Robinson 2004). Experience with British Gas, for instance, suggests that a considerable advantage is enjoyed by an incumbent which controls the pipeline network (as will SW) and from whom entrants are required to request a water supply. It is difficult to avoid discrimination against potential entrants, particularly since SW can plead that entry might jeopardise the performance of its statutory functions.

Moreover, experience in England and Wales suggests that bureaucratic delays in regulated access arrangements and delays in the resolution of complex disputes by the regulator are likely to put off prospective entrants. As the Monopolies and Mergers Commission (now the Competition Commission) remarked of the old British Gas regime, it was incapable of providing the 'necessary conditions for self-sustaining competition' (Monopolies and Mergers Commission 1993). Unlike British Gas, SW would have a separate subsidiary – but even so, the prospect of entering a market dominated by a nationalised competitor is unlikely to seem attractive unless the regulator adopts an open and determined pro-competitive stance.

If it is true that competition will not flourish under the provisions of the new Act, except perhaps at the margins of the industry, efficiency pressures on SW from product markets will continue to be weak. Since, as explained above, SW faces no shareholder efficiency pressures either, the prospects for improved efficiency under the new regime do not look good.

If Scottish Ministers leave the regulator alone, the Commission will have a better chance than in the past of stimulating efficiency improvements in SW. But, in the absence of any significant information from markets, the regulator will have very little information on which to base comparative efficiency studies. Presumably he will fall back on comparisons with the English and Welsh water companies, as he does now: the amalgamations in Scotland have suppressed possible Scottish 'comparators'.

Yet these comparisons are unlikely to be fruitful. As explained above, there has been very little attempt to liberalise the industry in England and Wales which therefore suffers from an intrusive and tightening regulatory system (Robinson 2004). Because there is little real competition among the regional monopolies, regulators have made do with so-called 'competition by comparison' ('yardstick competition') which is extremely unsatisfactory. There are serious difficulties in making useful efficiency comparisons within England and Wales because of differences in the conditions in which the companies operate. The econometric models used seem far too weak to standardise for varying conditions and to form the basis for comparisons which are used for price-setting (Robinson 2002). Given this inherent weakness, it stretches the system even farther beyond its proper bounds to try to include in the English and Welsh regime the Scottish water industry, where conditions are different again.

Privatisation and liberalisation

It is difficult to see how the Scottish water industry can be revived unless it is privatised. But privatisation should only be regarded as a necessary first step, an enabling measure. In itself, it is not sufficient. Market liberalisation is particularly important and should accompany privatisation.

Privatisation subjects privatised companies to the discipline of the capital market. However, it may not itself result in product market liberalisation and so there is no guarantee that efficiency gains from privatisation will be passed on to consumers. A number of British privatisations have simply transformed state monopolies into private monopolies, at least in the short term. In the case of the railways, for example, there is very little competition except for franchises (and then winning companies receive state subsidies). As already explained, the water industry in England and Wales, though privatised, is divided into a number of regional monopolies and hardly any competition exists. British Gas was privatised whole in 1986 and, for a number of years after privatisation, had a virtual monopoly because it owned the pipeline system which others had to use, and it had most of available gas from the North Sea tied up in long term contracts.

The advantage of product market liberalisation is that it sets in motion competitive processes which add to the efficiency pressures stemming from the capital market and, crucially, it passes on the benefits to consumers. Competitive markets give the power of exit to consumers, as well as to shareholders. Thus there is constant pressure on producers to provide combinations of lower prices and higher standards which appeal to consumers, and which their competitors then try to emulate. In other words, there is a race to the top.

This kind of market process is what Adam Smith and later classical economists meant by competition – a process of dynamic change in which the *status quo* is constantly disturbed by entrepreneurs who are looking for better ways to produce goods and services.[14] Free entry is the key. That means not just removing statutory monopolies but establishing economic conditions in which competition can flourish. If competitors can enter the market, incumbents (unlike monopoly nationalised corporations) cannot ignore them but must respond to the prices and service standards they offer.

Twenty-five years ago, a question that might have been asked about liberalisation of the markets of nationalised corporations was – is competition feasible and, if feasible, is it desirable? Many people regarded these industries as ‘natural monopolies’ where efficiency dictated that there should be only one supplier. However, theoretical advances, now backed by substantial practical experience, show the natural monopoly argument to have been largely false. Some of the nationalised industries, such as coal-mining and the airlines, were *unnatural* monopolies: that is, they were state artefacts where there were no efficiency advantages from sole ownership (Robinson and Marshall 1985). In other cases, in the utilities, there are natural monopoly elements, but large parts of the industries are potentially competitive and there is no economic reason why they should not be liberalised.

A recent insight about the nature of ‘network’ utilities is that the traditional gas, water, electric or telephone utility consists of a network of pipes or wires which is (given existing technology) a natural monopoly, yet other activities such as production, storage and supply to consumers are potentially competitive.[15] There are considerable advantages to consumers in having actual competition introduced into these latter areas. For example, the good can be produced at the wholesale level by a number of rival companies, thus keeping down production costs and promoting innovation;

there can be competition in storage, in meter provision and in meter reading; and, at the final stage, of supplying customers, rival companies can compete in terms of price and service. Consumers have a choice of suppliers, now that they are no longer the captives of a nationalised monopoly, and so they gain the ability to switch to a better offer, if one is available.

An essential part of this scheme of liberalisation is that the rest of the industry, the natural monopoly network, should be separated (preferably in a separate company). Separating the network and regulating it as a natural monopoly allows competition to reign in the rest of the industry, minimising the unsatisfactory business of regulation and concentrating it on the sector where, at present, it appears unavoidable. This process has been carried to its logical end in gas and electricity where there is competition to generate electricity and to produce gas and, after the product has passed through the network, there is competition to supply gas and electricity at retail and wholesale levels.

Regulation of the network is necessary because, unlike the competitive areas of the utilities where supplier rivalry protects consumers, some specific consumer protection against exploitation by the monopoly, including discrimination against potential entrants, must be established. In the British utilities, the usual form of protection has been by an independent regulatory office (Ofgem, Ofcom, Ofwat, etc.) which uses an RPI-x price control, among other devices, to keep network charges within bounds.[16]

Competitive parts of the industry are not subject to price controls (except for an interim period in which competition is being established), though the regulator uses his or her competition-promotion duty and duties under the Competition Act 1998 to keep a general watch on them. The Competition Commission stands ready in the background to take action if necessary. In the sectors where this scheme has been applied – in which competition is introduced where possible and regulation is used where there is no immediate prospect of competition – it appears to have worked well. In the energy utilities, in particular, where the regulators have been most

assiduous in promoting competition, competition flourishes in both wholesale and retail markets.

What to do

The present scheme of ownership, organisation and regulation of the water industry in Scotland shows virtually no sign of any application of economic principles nor does it recognise the insights that have already been gained from utility privatisation and regulation schemes. Only political expediency and bureaucratic convenience (and perhaps an emotional attachment to 'public' ownership, despite all the failings described above) can explain the original scheme and its modifications so far.

Under the new arrangements the industry remains essentially a nationalised monopoly (though there may be some competition at the margin for some large consumers). Thus, despite the welcome granting of greater independence to the regulator, it is not clear that the regulator and Scottish Water have escaped political control. If politicians did not wish to interfere, there would have been no reason to keep the industry nationalised.

Efficiency pressures are muted. The regulator may well continue to 'shadow' the England and Wales industry in an attempt to bring the Scottish industry up to the apparently much higher England and Wales standards. But, given the existing deficiencies of comparative competition in England and Wales, shadowing that system is most unsatisfactory. Indeed, it is paradoxical that an industry which has deliberately been kept nationalised should implicitly accept that it is inherently inferior to the privatised system in England and Wales by trying to model itself on privatised companies to obtain the benefits of their better standards of service.

The key objectives of reform should be to find ways to promote efficiency in the Scottish water industry and to pass those gains on to consumers. Experience elsewhere indicates that under nationalised monopoly these objectives are most unlikely to be achieved. Privatisation (to bring capital market disciplines) and liberalisation (to bring product market disciplines) are required. Reformers should bear in mind that water supply is, in principle, similar to the supply of gas and electricity, where competition now reigns over large parts of the industries. Production (extraction) and storage are dispersed and are potentially competitive; meter provision and meter reading are potentially competitive; the supply of water to consumers is also potentially competitive. Indeed, as in gas and electricity, the only 'natural monopoly' activity that requires regulation is the transport of water by pipeline.

More specifically, the following steps need to be taken.

First, though the new regulatory regime under the 2005 legislation is an improvement on its predecessor, there are lingering doubts about possible political interference with the regulator and with Scottish Water. To reduce regulatory uncertainty, these doubts should be dispelled by privatisation by public flotation. Even though such interference will not necessarily cease after privatisation, it will become significantly more difficult. Privatisation would also bring efficiency pressures from shareholders.

Second, entry to the industry should be made as easy as possible in the interests of stimulating competition. Licences to supply water should be freely available, subject only to the regulator being satisfied with the applicant's ability to perform the necessary functions. In contrast, a provision in the legislation that allows a role for Ministers to specify 'other factors' that would determine whether or not applicants should be granted licences should be eliminated.

Third, if the proposals to introduce competition for non-household customers are to have any chance of success, the regulator must apply a vigorous pro-competition policy to ensure that entry to the market occurs. Liberalisation of the market is so important that the regulator should be given a specific duty to promote competition.

Fourth, the prohibition on competition in the household market, which provides Scottish Water with millions of captive customers, should be removed. Household competition is not an imminent

prospect – competitive supply to larger customers will be easier to introduce and is likely to come first. However, it would be most unwise to rule households out, given that in some British utilities (notably gas and electricity) households have been major beneficiaries of competition.

Fifth, the disconnection between the industry and its customers that occurs because charges are collected by local authorities should be ended. Customers should be billed by their supplier so it is clear who is responsible for supply and associated services.

Sixth, when Scottish Water is privatised, water pipelines should be separated from the rest of the company, not in a subsidiary but in a separate private, regulated company. A separate pipeline company is an important competition-promoting device. So long as Scottish Water controls pipeline access, entry is likely to be limited. A separate company, however, would have a powerful business interest in transporting water for all customers and would ensure there would be no discrimination against entrants.

Notes

1. I have received many helpful comments on a draft of this paper from Dr Eileen Marshall and a number of anonymous referees, none of whom has any responsibility for its conclusions. This paper is an edited version of 'Reviving the Scottish Water Industry', published by the Policy Institute (Scotland), Series: Economy No.9, March 2005 and also draws on observations made in Robinson (2004).
2. To keep the chapter reasonably brief it omits two issues that are closely related to its subject, but which merit separate examination. It discusses the supply of water only and does not deal with sewerage. Second, it does not consider, in any detail, environmental and quality regulation of the water industry. This form of regulation, driven primarily by directives from Brussels that aim to 'improve' water quality even though its authors have no idea how much consumers would be willing to pay for water of different qualities, is increasingly intrusive and needs reconsideration (see Robinson 2004).

3. Most regulatory bodies for British utilities were established after privatization. Another corporation which is still nationalized but has a regulator is the Post Office.
4. Explanatory Notes on the legislation can be found at www.scottish.parliament.uk/business/bills
5. See, for example, Heald (1980).
6. "The Financial and Economic Obligations of Nationalised Industries" (Cmnd.1337), "Nationalised industries. A review of economic and financial objectives" (Cmnd.3437) and "The Nationalised Industries" (Cmnd.7131), respectively.
7. Pure public goods are those where it is not possible to exclude people from their supply and where consumption is non-rivalrous (supply to one does not reduce supply to another, so the marginal cost is zero). Because all the benefits of these goods are 'externalities' private suppliers cannot appropriate any benefits and so will not be willing to supply. In practice, there are very few pure public goods though a number of goods and services have some public good characteristics. Even classic public goods such as law and order and defence do not have to be financed and supplied entirely by the state: sometimes voluntary collective action is possible and so is contracting out of service provision.
8. The problems of 'public' ownership are explained in Robinson (2003).
9. The 2003 Water Act establishes a regulatory authority, the Water Services Regulation Authority, as has been done in other utilities, where a board rather than a single regulator is now the norm.
10. There have been a number of takeovers of water companies by companies not already operating water companies in England and Wales.
11. The objectives are listed on Scottish Water's website www.scottishwater.co.uk
12. Both Ofwat and WICS are, of course, constrained in their actions by the views of the environmental and quality regulators
13. *Role of the Water Industry Commissioner for Scotland*, www.watercommissioner.co.uk
14. For an explanation see Blaug (1987).
15. Due primarily to the late Professor Michael Beesley. See Beesley (1997).

16. RPI, the retail price index (a measure of inflation), minus x, which is a number devised by the regulator, intended to give an incentive to improve efficiency.

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