The relation between regulatory reform, industry objectives and framework conditions: Lessons from Norwegian network industries

Jostein Askim and Dag Harald Claes, University of Oslo

Introduction

In most member countries of the Organization for Economic Cooperation and Development (OECD), Norway included, the public sector radically increased its scope of responsibility in the period from 1945 to 1980. After 1980, most OECD countries carried out neoliberal reforms – in some cases, by taking principles derived from private-sector organization and management and applying them to areas of public responsibility; in other cases, by systematically transferring areas of responsibility from the public sector to the private sector (Hood 1994). In this paper we devote attention to Norway’s network industries: hydroelectric power, electronic communication, the railway and the postal service. Since the 1980s these industries have all undergone neoliberal regulatory reforms, though the type of reform and its degree varies.

In recent years, interest in network industries has increased markedly amongst scholars working in the fields of public administration and public policy. This is because neoliberal regulatory reforms have been implemented in these fields, rapidly and on an international scale since the 1980s. Observers maintain that today most governments in OECD countries have largely discarded the role of producer and instead adopted a regulatory role vis-à-vis the network industries (Majone 1997). Hence, scholars, including ourselves, see the network industries as a promising site for examining this new governmental role. A related aspect here is that network industries are also key areas for studying how change occurs in the demarcation between public and private sectors. These industries have characteristics allowing market mechanisms to be used in part or all of their activities, yet they are also
entities over which the public sector exercises a certain control or governance. Network industries comprise a core aspect of infrastructure, which is critical for the function of modern society and industry. Thus they are in a position of tension between corporate-economic profitability and public obligation, which implies that every citizen should (ideally) have equal access to their goods and services.

This paper explores the question of why Norwegian network industries have been subjected to neoliberal strategies and how this has happened. Although many neoliberal reforms will be mentioned here, our main focus is on regulatory reforms. We explore whether these reforms reflect changed objectives in official industry policies and changed framework conditions. As a point of departure, we expect to find significant regulatory reforms in cases where industry objectives and framework conditions have changed, and limited reforms in cases where objectives and framework conditions have remain unchanged.

We begin by reviewing the contents of reforms in the four network industries, after which we will outline of how the official industry objectives and framework conditions have changed throughout the reform period. Based on the foregoing sections, we will then explain the differences across sectors and close by discussing the more general role of politics in the network industries: Are regulatory reforms as irreversible as rolling snowballs, or can they be reversed in response to unwanted effects?

**Regulatory reforms in Norwegian network industries**

A shared characteristic of the selected industries is that large portions of their production costs are linked to infrastructure for transportation or distribution of services. In some cases, which could be characterized as natural monopolies, one company can produce more effectively within a geographically delimited area than several companies can. Put simply, it is often grossly ineffective to lay parallel sets of pipes, wires, cables or tracks. In Norway as in the rest of Europe, the long-reigning perception was that most network industries had strong features of natural monopolies.

**The hydroelectric industry**

The Norwegian hydroelectric industry has always been marked by public control and public ownership. Ever since the 1917 concessionary law the state has had pre-emption rights on all new developments in hydroelectric power. Concessions to private industries have been limited in duration, and reversion rights have ensured that the state has gratuitously regained
all hydroelectric power plants after being owned privately for 60 years. Ownership of energy distribution has traditionally been fragmented. In 1973 there were 337 distribution networks registered, whereof 76 percent had less than 5,000 customers. In most cases, the network owner was the sole supplier within a given area. Due to poor maintenance of many hydroelectric plants, and too little import and export of hydroelectric power between distributors, a situation arose in which some parts of the system had excess energy and other parts suffered deficiencies. Moreover, large price differentials were experienced between different parts of the country. The construction of large transmission lines from the 1960s and onwards made it increasingly possible to even out these differences.

In the late 1980s various organizational reforms were suggested for the hydroelectric industry. In the spring of 1989, the social democratic government presented to the Storting (parliament) a proposal to establish 20 regional companies, which would coordinate the distribution of hydroelectric power within their respective regions. The Storting was unable to consider the proposal before its spring session expired, and when the autumn session began, the newly elected centre-right government withdrew the original reform proposal. In the spring of 1990, however, this government presented its own proposal, which included many of the same elements as in the first proposal. The major difference was that it suggested establishing a common, national market-based system for the trade of electricity, with an exchange house for trade in the wholesale market and free choice of supplier for every individual customer. This proposal was passed into law, allowing for a regulated third-party-access regime under which third parties were entitled to access the hydroelectric networks in a non-discriminatory manner – this was a prerequisite for individual consumers being able to freely choose between retail suppliers. A sharp distinction was introduced in the retail market, between companies acting as suppliers of electricity, and companies acting as distributors. With the Nordpool Electricity Exchange, free competition between producers in the wholesale market was introduced. A regulatory tool the state has used vis-à-vis suppliers is to publish the Norwegian Competition Authority’s (NCA) price overviews. These give information about retail market prices, and thus help consumers choose suppliers in an informed manner. As such, the price overviews create incentive for competition between suppliers. Owners of hydroelectric networks, i.e., distributors, have become subject to individually defined income regulations. This entails that the state determines the revenue ceiling for each individual network enterprise.

In today’s wholesale market, trade happens largely via a Scandinavian exchange for trading electric power. The public enterprise Statkraft is a producer and distributor in the
market, on par with municipal and private actors, while the public enterprise Statnett is responsible for coordinating the operation of the entire system so that the amount of electricity generated equals consumption at all times.

With the Energy Act of 1990 the hydroelectric industry was revolutionized. It received a completely new regulatory regime and new conditions for producers. In contrast to the railway and postal service’s customers, electricity consumers have also experienced a radically new situation. Two points are particularly worth mentioning. Firstly, there is reason to believe that the energy industry now operates more efficiently because excess energy in one region is now sold to other regions with insufficient capacity. This has led to a geographical evening-out of prices and some price reduction (Kinnunen 2004). Even so, the impression of a national evening-out must not be exaggerated; regional price differentials have grown smaller but are not eliminated. Limitations in transmission capacity have often caused the market to divide into smaller, considerably more concentrated sub-markets. The most important efficiency dividend, however, is that since 1990, the demand has been covered without having to exploit new watercourses.

Secondly, the establishment of a common Scandinavian energy market has made Norway less dependent on its own energy production. Also, the relatively low prices have made it less tempting to invest in new capacity. Together, these conditions create a situation in which production capacity has not managed to keep up with growth in demand. Norway is no longer a self-sufficient producer of electricity. Whether or not this should be perceived as a problem depends to some extent on how reliable the external transmission capacity is. Norwegian politicians continue to talk about a national ‘energy balance’ as an independent objective, but in reality, no suitable initiatives have been taken to achieve it (Christiansen 2007). To depend on a larger energy market and to be integrated in it, means that prices are no longer determined according to the relation between supply and demand within Norway. This makes the Norwegian power market vulnerable to price shocks generated outside its borders. Meanwhile, price shocks generated within the country, e.g., abnormally low precipitation, can be counteracted through increasing the external supply. Nevertheless, the debate over electricity prices struggles for coherency: On one hand, the Storting says low prices are desirable out of respect for every citizen’s right to have equal access to electricity; on the other hand, higher prices are desirable with respect to protecting the environment, and in order to ensure investments in new production capacity entailing the exploitation of watercourses (Christensen 2007).
Neoliberal reforms in telecommunications have mainly involved allowing the free establishment of net-based service production and competition in areas where exclusive rights cannot be argued for by appealing to a natural monopoly. The fixed access network to which subscribers are connected can still be considered a natural monopoly, and is therefore an object for stiff regulation (Hagen 2004). Plans for softening the telecommunications monopoly began during the 1981-1985 centre-right government, and were put into effect by the subsequent social democratic government. In 1987, Televerket (Norway’s national telephone company) was restructured into three organizations: Monopolized activities remained the responsibility of Televerket, while competitive services were delegated to TBK AS. Administerial tasks were transferred to a new directorate, the Norwegian Telecommunications Authority (NOU 1989: 5), due to the need for distinguishing between regulatory and operative roles and to ensure competence in making regulatory decisions. The agency is placed under the jurisdiction of the Norwegian Ministry of Transport and Communications. In 1988, the business and residential telecom network and cable television network were exempted from the monopoly (Skogerbø 2001). Between 1989 and 1993, many services became subject to competition, partly because the European Union was strongly urging reforms in telecommunications. Norway committed itself, through the European Economic Area (EEA) Agreement, to de-monopolize its telecom market by 1 January 1998. In 1994, the Storting voted to transform Televerket into a new public limited liability company named Telenor Communications. State ownership was reduced in the year 2000, from 100 percent to 77.7 percent. In 2003, the company sold a further 15 percent of its shares, leaving the state with 62.4 percent. In 2000, state ownership was transferred from the Ministry of Transport and Communications to the Ministry of Trade and Industry, due to ongoing criticism of the combined roles of owner and regulator of the telecom market (Trollstøl and Stensrud 2005).

In Teleloven of 1995 (a law pertaining to telecommunications) concessions and instructions for specific services were added as governance instruments. The law’s chief purpose was to help transform the telecom monopoly into a competitive market by facilitating the establishment of competition. As of today, the Post and Telecommunication Authority (NPT) monitors and regulates the Norwegian postal service and telecommunications market in accordance with the 2003 Ekomloven (Electronic Communications Act). Today two
companies, Telenor and NetCom, run the telecom network on a concessionary basis, and the NPT carries out surveillance to ensure that they meet their concessionary obligations.

Yet time stands still for no man; by 2006, a new Electronic Communications Act came into effect. It intends to reflect technological and market-oriented developments within electronic communication, including the fusion of information technology, telecommunications and media such as Internet-based television and radio. In order to facilitate competition, actors with strong market positions have become key objects for industry regulation (National budget 2005, p. 130). Telenor, in particular, is an example of an actor enjoying a strong market position. The company’s strong horizontal and vertical integration gives rise to competition-policy challenges, and this is one reason why cost-oriented pricing is an important principle for today’s regulatory regime (Hagen 2004). In order to hinder network owners like Telenor from denying network access to competitors, or from demanding unreasonably high prices, the European Union and Norway implemented the Open Network Access directive in 2000, which demands that regulatory authorities ensure access to the existing telecom networks at cost-based prices. This directive’s scope also covers mobile phone services. Network operators with strong market positions are required to offer access to service providers who lack their own networks (Hagen 2004).

The state authorities also use other instruments for regulating actors within the electronic communications market. One of these is price ceilings. This regulatory tool is used internationally, an example being the newly-introduced price ceiling on what has been termed ‘roaming’, that is, international mobile telephony between European Union countries. Norwegian operators are included under this regulation, yet price ceilings are not used in regulating domestic Norwegian telephony. Another regulatory tool is price overviews. Just as in the electricity industry, the Norwegian Competition Authority publishes price overviews of electronic communications services. The idea is that this lowers market prices because consumers will switch to cheaper retailers.

The railway

Until December 1996, the Norwegian railway’s infrastructure, passenger and cargo transport were all subsumed under the administrative company Norwegian State Railways (NSB). After 1996 NSB was divided into two companies: the government agency Norwegian National Rail Administration and the state-owned special-legislation company NSB BA. At the same time the government agency called Norwegian Railway Inspectorate was established in order to control and supervise infrastructure and rail transport. Then, in 2002, the special-legislation
company NSB BA was transformed into a wholly state-owned limited company called NSB AS and placed under the jurisdiction of the Minister of Transport and Communications.

In 2003 competition was allowed for national and international cargo transport on the Norwegian railway network. Goods transport is today dominated by CargoNet AS, NSB’s former cargo division. In 2004, the centre-right Bondevik II government decided to allow competition on the right to transport passengers on the Gjøvik Line. NSB Drift AS won the public tender bid, and since 2006, this firm has run the Gjøvik Line on a concessionary basis. The Bondevik II government also planned to allow competition on the Bergen Line and Sørlandet Line, and on running and maintaining infrastructure, that is to say, tasks subsumed under the Norwegian National Rail Administration. These plans were discontinued by the centre-left Stoltenberg II government in the fall of 2005.

Today, with the exception of the Gøvik Line, NSB AS has responsibility for passenger traffic throughout Norway’s entire railway network. The Norwegian National Rail Administration is responsible for running, maintaining and investing in railway infrastructure, including train stations. This government agency is also responsible for management and assigning train time slots on the national railway network.

*The postal service*

The postal service is the oldest network industry. In Norway, it was first established in 1647 and local deliveries began in 1857. The postal law of 1871 regulated the industry, and through it, the state awarded itself a monopoly on a number of services. 1952 witnessed the ‘mailbox law’ and in 1968 postal codes were introduced; these are examples of some of the few reforms in the industry before the 1996 postal law. Several reforms then followed, which changed the service’s corporate structure and scope of exclusive rights (Neumann 2006). In 1996, the postal service was transformed from being an administerial company into a special-legislation company, *Posten Norge BA*. In 2002 its organizational form changed again, this time, into the wholly state-owned limited company *Posten Norge AS (Norway Post AS)*, and it was placed under the jurisdiction of the Minister of Transport and Communications. Overall, the reforms in the postal service throughout the 1990s have had a commercial character. The service has been restructured through collaboration with privately-owned grocery stores, and traditional postal service has been heavily rationalized through reorganization and staff reductions.

Changes in company structure are related to changes in areas where the postal service previously enjoyed a monopoly. In the 1996 postal law, the service’s exclusive rights were
delimited to packages of up to 350 grams. This was a limited reform since only two percent of letter volume exceeded this limit. Since then the monopoly has been further curtailed, to the point where Norway Post today only holds exclusive rights on letters of up to 50 grams – in other words, typical letters between private individuals or from institutions to private individuals. The Bondevik II government proposed a complete de-monopolization of the postal service (St.prp. nr. 34 2004-05), but this was frozen by the Stoltenberg II government in 2006, in anticipation of developments in the European Union. The Stoltenberg II government is now lobbying against the European Union’s plans to further deregulate the postal market (Navarsete 2006).

Norway Post AS now delivers mail on a concessionary basis. Its duties include nationwide mail delivery, six days a week. The Norwegian Post and Telecommunications Authority monitors the company to ensure that it meets its concessionary obligations.

**Prerequisites for reform? Changes in industry objectives and framework conditions**

As a first step towards explaining the contents of the regulatory reforms described above, as well as how they were initiated, we shall now examine how official industry objectives and framework conditions in the network industries changed before and during the reform process.

*Industry objectives*

By official industry objectives, we refer to what politically elected entities – as well as agencies who have been delegated authority by politically elected entities – want to see happen in a particular industry. We are primarily interested in objectives for efficiency and distribution. In cases where the public sector has taken the sole or main responsibility for a network industry, usually through a monopoly, this has been based on arguments related to these two types of objectives.

*Efficiency objectives:* We define efficiency as cost-effective production. A prerequisite for cost effectiveness is the lack of waste in production factors, and that such factors are combined in order to produce a given product as cheaply as possible, given the cost of production. As mentioned above, efficiency is usually a critical argument for why the state should maintain sole or chief responsibility for network industries. Efficiency gains, it has been claimed, *cannot* be achieved through privatization or introducing competition, because network industries have strong features of natural monopolies; parallel networks have hardly
been profitable and network operations usually demand a high degree of coordination. In cases where the state has held chief responsibility, it has often been argued that state ownership allows the authorities to require producers to fulfil production objectives. In some cases the concern for productivity has been used as an argument against regulatory reforms along neoliberal lines. A clear example is the hydroelectric industry, where safety of delivery is singled out as the reason why the state retains chief responsibility for the national transmission network. In other cases, the need for productivity has been used as an argument for neoliberal regulatory reforms. The clearest example is the electronic communications industry, the reigning opinion being that if the state holds chief responsibility, this would hinder innovation; for example, fusing telecommunication, information technology and television media could be done better by market actors than by the government.

**Distribution objectives:** By distribution, we refer to how the services offered by network industries are designed in relation to distribution between groups. To be connected to a network is seen by many as almost a citizen’s right, independent of one’s income and place of habitation. One distribution policy argument for why the state should retain chief responsibility has therefore been that networks administered by network industries represent a common social good which the public sector should administer in order to distribute – and re-distribute – equally; state authorities should have the potential ability to ensure a different distribution between groups than what a free market would render. Arguments based on distributional considerations gain legitimacy by appealing to nation building and social integration. Networks hold the nation and the culture together. Groups to which attention is devoted are often geographically defined. For example, in railway policy, extensions or shutdowns of service are usually discussed in relation to geographic distribution; so also postal rates in postal policy. And broadband distribution and mobile base-station coverage are similarly discussed according to geography in electronic communications policy. A further argument for regulating network industries is the need for safeguarding socio-economic distribution. The electronic communications industry can serve as an illustration. Here the expanding broadband network is an ambiguous example: On one hand, state authorities have allowed market actors to charge private households prices which clearly press many out of the market; this was illegal before the state telephone company was reorganized. Yet we concurrently hear sporadic demands from politicians about free broadband in cities, such that everyone, regardless of economic ability, can access Internet.

How then, have efficiency and distribution goals in network industries developed throughout the reform period? Towards the late 1980s, it was recognized that the *hydropower*
sector suffered from great inefficiency, partly due to too many small companies and partly due to a lack of ‘large-business’ advantages in the transmission system itself. This was the case in spite of existing infrastructure, which would have allowed these advantages on account of the transmission network’s robust expansion in the 1960s and ‘70s. While preparing the Bondevik government’s energy law, it was claimed that efficiency could best be achieved by establishing market-based trade in electric power, preferably in partnership with Sweden. Efficiency would be ensured through linkages: first the Norwegian regional production and distribution systems would be linked up, and then in turn linked to Sweden and (to some extent) the rest of Europe. This reform was prepared concurrently with the 1990 energy law and implemented in 1996. Although the 1990 Energy Act emphasizes efficiency through competition in the hydroelectric industry, the objective of ensuring public ownership of the resource itself – water power – has remained unchanged, not least through the previously mentioned reversion arrangement. In the existing system, private owners of hydroelectric power must freely give the water resource and power plant back to the state, without compensation, after 60 years; meanwhile municipal and central-state owned power plants own their resources for all eternity. In June 2007, the court of the European Free Trade Association (EFTA) delivered a verdict declaring the existing practice to be in conflict with the European Economic Area (EEA) Agreement. The EEA Agreement does not, in itself, hinder public ownership; rather, it is the discriminatory treatment of private actors in relation to municipal actors which the EFTA court has condemned. This example shows how the EEA Agreement, in some cases, could influence which goals Norwegian authorities are able to reach – or in any case, how they should be reached.

Neoliberal reforms in the hydroelectric industry are clearly backgrounded in a new perspective on what will best serve the efficiency objective, yet the reforms also affect distribution objectives. Every household, regardless of location and economic ability, should have access to electricity – this has always been a clear objective. Meanwhile, the same distributional ambition has not prevailed with regard to the price of electricity. In the regime prior to the 1990 energy law, large regional price differentials were accepted because the Norwegian market for electric energy consisted, in reality, of a number of geographically delimited production and distribution systems. Today it can seem as though the linking of markets has helped lower prices, in comparison to what would have been the case had reforms not been implemented. What is more, price differentials have evened out geographically. The authorities have, however, dispensed with fixing prices according to social or political considerations.
In the electronic communications industry, state authorities have allowed network owners to prioritize building broadband and mobile phone networks in heavily populated areas. A strong ambition for geographical equal treatment within this industry would either have been very expensive, or it could have led to service cuts in heavily populated areas. As such, equal treatment, in practice, would have turned into a kind of race towards the lowest standards possible.

With regard to the railway and postal service, efficiency concerns have been strong, but more as commercial objectives for NSB AS and Norway Post AS. These companies continue to dominate the service production in their respective industries, but operate along the lines of ordinary limited liability companies needing to earn a profit, rather than as administrative units carrying out politically defined objectives. In the railway industry, the concern for equal geographic distribution has been toned down in recent years. Authorities have allowed NSB to reduce or discontinue ‘unprofitable’ train lines in exchange for improving services in heavily populated areas. For the postal service, equal geographic distribution has remained a high priority. State authorities have not allowed the postal service to differentiate costs or vary the frequency of service between regions with large and small volume. The overriding objective is still to bind the country together through an efficient distribution network – one in which it costs the consumer the same amount to send a letter within the city of Oslo as it does to send it 2,500 kilometres, from the southern to the northern tip of Norway. Hence, the price should not reflect actual transportation costs.

Framework conditions for reform

Three types of framework conditions are important in light of our interest in explaining regulatory reforms. First are technological framework conditions, which can change the cost and access structure in a more competition-friendly direction. Second is the elasticity of demand, meaning the relation between changes in price and changes in demand for whatever product is sold by an industry. Third are articulations of interest, examples being concentrated ownership and the presence of veto groups. Put simply, if a network enterprise is characterized by few technological changes, little elasticity in demand, concentrated ownership and strong veto groups, then the preconditions for introducing market principles are far worse than if a network enterprise shows opposite values for these variables. In the following paragraphs we will look more closely at each of these variables and illustrate them with examples from the network industries.
Technology: One key feature of societal development over the last 20 years is the breakthrough in information and communication technology (ICT). In addition to creating markets for new products, ICT has also changed fundamental features of traditional products. In our context, this is particularly apparent within the electronic communications industry. Here the basic features of the product (the physical telephone) and the service (telephony) have undergone fundamental change. The mobile telephone is not plugged into a fixed line network, and the price of wireless communication has fallen dramatically in comparison to fixed line network communication. Hence, the significance of owning the network – a key rationale for the national telephone monopoly – is reduced through technological development. The same is not the case for the supply of water. Nor for postal delivery, which continues in much the same way as it did a century ago. And even though modern trains move faster than trains did one-hundred years ago, technological changes in electronic communication are considerably more significant than changes in train technology, because high speed rail technology has not been put to use in Norway. As for the hydroelectric power supply, the high-voltage transmission network developed in the 1960s made it increasingly possible to see Norway’s different regions as one unified market. This was a clear precondition for the radical market-related changes following in the wake of the 1990 energy law. With regard to the industries analysed in this paper, we envisage the following scale:

Figure 1: Technological change

<table>
<thead>
<tr>
<th>Low degree of technological change</th>
<th>High degree of technological change</th>
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</thead>
<tbody>
<tr>
<td>Post</td>
<td>Railway</td>
</tr>
<tr>
<td>Railway</td>
<td>Electricity</td>
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<tr>
<td>Electricity</td>
<td>Electronic communication</td>
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</tbody>
</table>

Market conditions: Increased efficiency in the production of goods and services is a central objective of the regulatory reforms. This efficiency dividend should give consumers lower prices on goods and services, yet how consumer demand reacts to lower prices will vary from industry to industry¹. Cross price elasticity denotes how the demand for a product changes in

¹ Direct elasticity refers to how consumer demand changes in relation to changes in the price of goods. Put simply, it depends on the degree to which the consumer perceives the product as a necessity, or whether it is deemed a luxury. Most network industries contain elements of both. In the case of the postal services, an application for a house loan is mailed to the bank regardless of the postage rate, while the number of Christmas
relation to prices of other products. This effect is preconditioned by the consumer’s ability to switch between products without much difference in cost or loss of value. Consequently, for the consumer, it is a matter of the availability of alternative products with equivalent values. Trains compete with airplanes, cars and busses, but water has no competitor. Electric power lies somewhere in-between. Alternative forms of energy exist but are often costly and demand investments in new technology, for instance, geothermal energy systems. Electronic communication services are more difficult to categorize. Internet via telephone wires can be replaced by the same media via the electrical cords or a television cable, whereas it is more difficult to see alternatives to mobile telephony. In short, the industries vary with regard to the availability of alternatives. We envisage the following scale:

Figure 2: Availability of alternative products

<table>
<thead>
<tr>
<th>Alternative products are</th>
<th>Alternative products are</th>
</tr>
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<tbody>
<tr>
<td>unavailable</td>
<td>available</td>
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</table>

Electronic communication, Energy

Railway, Post

In industries where consumers have access to many alternatives, and where switching between them happens without incurring extra cost, the potential for misusing market power will be more limited than in industries where alternatives are nonexistent. Alternatives weaken an industry’s quality of being a natural monopoly. The relevant market for consumers is not the market for train services but for transportation services, regardless of the means. State authorities can influence competition between such substitutable industries, for example, by abstaining from giving bus companies concessions on roads running parallel to train lines.

Articulations of interest: The third framework condition we shall discuss has a more political character; it concerns the existence of different types of interest groups with power to hinder plans to restructure an industry. An increased use of market mechanisms presupposes that resistance to change either does not exist, or that it has been quelled. Market reforms can encounter resistance for several reasons, depending on the various industries’ characteristics and traditions. Counterarguments can pertain to distribution policies, cultural policies, they...
can appeal to the need for maintaining a monopoly on professional knowledge, or they can emphasize other values than economic efficiency, such as a concern for rule of law or equal treatment.

One important aspect of interest articulation is the existence of veto groups. Are there parallels to elevator installers and aircraft controllers in the network industries? Different interest groups’ ability to exercise force varies from industry to industry, for example, it can be significant that the hydroelectric industry is a source of income for the state, while the railway is an expense. Meanwhile, some network industries are characterized by strong labour unions linked to traditional state monopoly activities. To the extent such groups support reforms, they can be a strong driving force for it, but if labour unions oppose reforms, the reforms can stop up. Waterworks and power plants have traditionally been owned by municipalities, and this prompts questions about district policies and local autonomy, issues which could also hinder reforms.

A second important aspect of articulations of interest is the extent to which they are linked to party politics, for politicians can also be expected to try to influence network industry reforms. This especially concerns attitudes to neoliberal reforms which often follow right-left axes in the political landscape. Thus we cannot ignore that these processes also vary in relation to which government is in power at any particular time. The postal service illustrates this point.

Analysis: Regulatory reform, industry objectives and framework conditions

Figure 3 illustrates what we have thus far shown – that the scale of neoliberal regulatory reforms varies between the network industries. The hydroelectric and electronic communications industries have undergone large reforms, yet by comparison, reforms in the railway and postal service have been small. We now return to our research question. To reiterate: Do regulatory reforms reflect changed objectives in official industry policies and changed framework conditions?

As Figure 4 illustrates, we expected to find large reforms where objectives and framework conditions had changed, and limited reforms there where objectives and framework conditions remained unchanged.
Figure 3: Changes in goals and framework conditions, and the scale of neoliberal reforms

<table>
<thead>
<tr>
<th></th>
<th>El. power</th>
<th>El. com.</th>
<th>Railway</th>
<th>Post</th>
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<tbody>
<tr>
<td>Sector policy goals</td>
<td>Moderate</td>
<td>Small</td>
<td>Small</td>
<td>Small</td>
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<tr>
<td>changed</td>
<td></td>
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<tr>
<td>Framework conditions</td>
<td>Moderate</td>
<td>Large</td>
<td>Small</td>
<td>Moderate</td>
</tr>
<tr>
<td>changed</td>
<td></td>
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<td></td>
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<tr>
<td>Neoliberal reforms</td>
<td>Large</td>
<td>Large</td>
<td>Small</td>
<td>Small</td>
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Figure 4: Predicted reforms, based on changes in objectives and framework conditions

<table>
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<tr>
<th>Extent of change in framework conditions</th>
<th>Low</th>
<th>High</th>
</tr>
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<tbody>
<tr>
<td>Extent of change in industry objectives</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>No prediction</td>
<td>Large reform</td>
</tr>
<tr>
<td></td>
<td>El. energy</td>
<td>El. com.; Post</td>
</tr>
<tr>
<td>High</td>
<td>Small reform</td>
<td>No prediction</td>
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<td></td>
<td>Railway</td>
<td>El. com.; Post</td>
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</tbody>
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Using Figure 3’s summarization as our point of departure, we have placed the four network industries under the rubrics given in Figure 4. For the electricity and railway industries, the situation coincides with expectations. The hydroelectric industry’s regulation has been reformed in a neoliberal direction. This is not surprising. The reforms can be accounted for partly by pointing to the industry policy’s increased emphasis on efficiency, and partly by pointing to changed framework conditions – the construction of a high-voltage transmission network. Meanwhile, in certain respects the railway is the electricity industry’s antithesis. Railway regulation has changed little in the last 15 years, except for infrastructure being separated from transportation. This lower reform scale is not surprising, since the railway’s policy objectives have not changed and neither have its framework conditions. The market situation is partly an exception, since rail travel has faced stronger competition from airplanes and busses in long-haul transport. Yet with respect to the railway’s core task, transporting commuters to large cities, competition-related framework conditions have not changed.
For the two remaining network industries, the postal service and electronic communications, the reasoning illustrated in Figure 4 renders more unclear predictions about the scale of reform. In both industries the policy goals largely remain unchanged, and this situation should warrant a low scale of reform. Their framework conditions, however, have changed, albeit to different extents and in different ways.

The postal service’s policy goals remain largely unchanged, and its technological framework also remains the same. The core technology – mail delivery – continues as before. On the other hand, this industry has had to cope with stiffer market-related framework conditions. Electronic media have replaced much of the volume of correspondence previously sent by surface mail. Increased use of Internet and email have sharply reduced private individuals and businesses’ traditional letter production, and this tendency is projected to continue, not least because the acceptability of electronic signatures will probably increase. These new market-related conditions largely account for the reforms that have occurred within the postal service as a company. Its services continue to be geographically spread, yet are thinner than before. Basic postal services are available in many locations and frequently integrated into grocery stores, yet services requiring a more demanding level of competence, banking in particular, are only offered at certain locations and at more limited hours. In return, the remaining full-service post offices have diversified to the point where they now resemble stationary and office supply stores embellished with CD and DVD sections.

Along with postal and rail services, but in contrast to the hydroelectric industry, the electronic communications industry has operated under stable industry policy goals for the last 15 years. Nevertheless, electronic communication has undergone comprehensive neoliberal regulatory reforms. One explanation can be the radically changed technical framework conditions; it is as if ICT has run faster than the politicians and has changed the conditions for regulating the existing fixed line telephone system. Not least, completely new markets and solutions have been created – mobile phone networks, ‘Voice over Internet Protocol’ (VoIP) and broadband. Attempts to thwart the misuse of strong market-positions have left their mark on reforms in the industry precisely because the dominant actors have a tendency to misuse their market positions, either by mere virtue of size, but also by owning the fixed phone lines and base transceiver stations. As such, regulations are geared towards counteracting the consequences of natural monopolies which remain in the industry.

Some will claim that the way in which competition policies affect Telenor is something of a paradox. A comparison with the railway is instructive: for the railway, where competition is almost non-existent, a sharp distinction is drawn between network owners and
network users. By contrast, in the electronic communications industry where competition is considerable, the distinction between network owners and network users is more diffuse. The state has allowed Telenor to retain a strong position, not only in the fixed-line telephone network, but also in the mobile phone network and cable television and satellite distribution networks. This gives Telenor rich opportunities to take advantage of its national market position, because it is difficult to determine what the correct price should be for third party access to a network. The absence of reforms addressing this issue can perhaps be accounted for by pointing to articulations of interest. We have discussed the role vested interests can play in hindering reform, but the electronic communications industry might illustrate the opposite, namely that articulations of interest can promote reform. Commercial forces and those active in establishing the industry’s policies all wanted Telenor to hold a strong position, not least because it would give the company muscle to expand internationally.

Conclusions: Still room for politics in the network industries?

Neoliberal reforms in how network industries are regulated – which in practice means the transfer of tasks from the public to the private sector and the introduction of market mechanisms – has been brought to bear in Norway’s network industries throughout the last 15 years. The largest reforms have happened in the electronic communication industry and in the hydroelectric industry, while the postal service and the railway have undergone smaller reforms. This paper shows how variations in reforms can partly be explained by pointing to industry policy objectives and framework conditions; these conditions may be technological and market-related, but can also be related to articulations of interest.

In closing, we shall widen our horizon and look at the role of politics in the network industries. How can elected politicians be held accountable for the effects of reforms in the network industries? Can the reforms be altered and reversed if they do not deliver intended results? Or are they irreversible – like uncontrollable rolling snowballs? As a starting point for this discussion, let us first quickly review the reforms’ results, such as they appear today. The electronic communications industry is that network industry which has undergone the most comprehensive change in the last 15 years. Its regulatory regime is totally different; many more actors are involved and in some respects there is sharp competition. Furthermore, the industry has gained many more products and completely new consumer patterns. Given that so much has changed, this causes the past to be a less relevant measuring instrument when asking whether the regulatory regime for telecommunications has effectively promoted the objective of better and cheaper services. The array of products is overwhelming, but
conclusions about prices are ambiguous. On one hand, overviews from the OECD show that Norway has, in recent years, been among the cheapest countries in the world for fixed line networks, fixed telephony, mobile telephony and base station capacity (Report to the Storting no. 15 (2004-2005: 69)). On the other hand, compared to its closest neighbouring countries, Norway’s prices are higher for fixed line telephony, mobile telephony and mobile services such as SMS and MMS (Jensen and Eggum Johansen 2004). The fact that prices are higher in Norway than in the rest of Scandinavia cannot be explained by pointing to geographical and topographical differences between the countries. The biggest problem may be insufficient competition between operators in the market. Moreover, differentiation in the services offered, increased consumption and a new price structure have all caused the average household’s expenditure for electronic communication to rise. The cost differential between households in cities, villages and rural areas has also increased, and the same is the case for differences between regions. One interpretation could be that reforms have not been radical enough in relation to the market, or that there are weaknesses in the market.

As stated above, regulatory reforms in the hydroelectric industry clearly are backgrounded in a new perspective on what will best serve the objective of efficiency, but the reforms have also affected distribution goals. Today it can seem as though the linking of markets has led to lower prices, on average, than what would have been the case had reforms not taken place, and that price differences have evened out geographically. The authorities have however expended with fixing prices based on social or other political considerations.

From the perspective of customers, the railway is an exceedingly stable production system. NSB is still the sole deliverer of all transport services in the passenger market, and although a certain amount of product development occurs, rail travel continues much in the same way as before. Rail traffic has increased in recent years, and NSB enjoys high values on variables such as precision and customer satisfaction (after several years of poor results). Infrastructure is nevertheless a challenge. Rail traffic in and around Oslo, Bergen and Trondheim has reached capacity (Jernbaneverket 2007) and the Norwegian National Rail Administration claims, with impartial expert research in hand, that today’s allocations are half of what is needed in order to renew the rail network (Aftenposten 9 July 2007). It seems clear that to genuinely accentuate the railway’s role will require immense investment and a long-term ‘balancing act’ between commercial objectives and socio-economic objectives.

In the postal service, concern for regional distribution has attenuated somewhat, since commercial profitability has become a more important factor in the company’s calculations. This has entailed the shutdown of some post offices and rural routs, while tightly populated
areas have enjoyed increased access through service incorporation into grocery stores. The group experiencing the greatest change is probably the postal services’ employees, for ten years of reorganization have reduced the workforce’s size.

Based on the descriptions of these situations, we can assume that the motivation for re-reform – meaning either further or reversed regulatory reform – is greatest in the railway and hydroelectric industry, lowest in the electronic communications industry and relatively slight in the postal service.

Preconditions for re-reforms can also be linked to which explanatory factors are most applicable to the individual enterprises. Technology was the most pertinent factor for electronic communications; for the hydroelectric industry it was concern for efficiency, distribution and production; efficiency was the most important factor in the postal service and railway. Of these various factors, technology is the hardest to control – if controllable at all. Production and distribution (of electricity) are more controllable, and company-internal efficiency is the easiest to control. In practice, this means that the conditions for reversing reforms would be worst in electronic communications and best in the postal service. Yet as we have mentioned, the motivation for reform reversal is probably less in electronic communications than in the postal service.

One conclusion is that there where few changes have happened – in the railway and postal service – the possibilities for re-reform are greatest. Where changes have been most radical, as in electronic communications, the possibilities for re-reform are lowest. Changes in electronic communications can be characterized as system changes, tightly linked with international conditions and technological framework conditions. The changes in the postal service and railway have been system-internal, whereas hydroelectricity holds an intermediate position. Given that electronic communication reforms have involved transference of ownership and responsibility from the public sector to a more privatized market, these clearly qualify as neoliberal reforms, yet reforms in the other network industries have been more moderate and could thus more aptly be described as applications of market-related logic in executing public sector responsibilities.

Have neoliberal regulatory reforms changed the conditions for political governance of these areas? The conditions for governance, policy implementation and management have been correspondingly reduced, most of all in the electronic communications industry; they have been reduced to a lesser extent in the hydroelectric industry, even less for the postal service and least of all for the railway. This may indicate that in future, if goals for hydroelectricity, the railway and the postal service change in the direction of raising prices,
increasing availability and changing products, *then* more system changes will be necessary. Revisionist reforms may be insufficient. For the railway, this could involve raising the economic system to a higher level where earnings and expenses are distributed over a larger area and over a long term perspective. In sum, it is a matter of the policies through which these industries are governed and whether preconditions obtain for these types of reforms.
Bibliography


