

Summary:

Local Public Transport Systems

Financial and Organisational Frameworks in Norway and Abroad

Public transport is undergoing rapid change, in Norway as well as in most other European countries. Ownership structures and operations of the public transport industry in various countries are closely related to the legal frameworks chosen by the respective governments. Therefore, changes in corporate competition and ownership, as well as cost levels and socio-economic effect, are all consequences of changes in legal and financial structures.

Our analysis of the variety of existing frameworks for public transport in urban and regional areas in Norway reveals a complex picture of the sector. We have conducted research on company restructuring, efficiency gains, market effectiveness and contractual forms. The aim of this report is to present a summary of our key findings and compare our findings to similar analyses of other countries.

Within the research project “Institutional and financial framework for the development of efficient and rational local transport”, financed by the Research Council of Norway, the Institute of Transport Economics has carried out four different analyses focused on:

- Restructuring of the bus transport industry (Carlquist 1998)
- International trends compared with the Norwegian development
- In-depth analyses of developments in 5 urban areas (Norheim and Carlquist 1999)
- Development trends based on local and regional bus transport statistics (Johansen 1999).

The aim of this report is to summarise the findings in the studies of the Norwegian local public transport sector, comparing some key findings by developments in other countries.

Organisational frameworks

In line with the classification of organisational forms provided by Van de Velde (1997), the predominant system in Norway is market-based, with autonomous private companies dominating the market. County councils approve fares and levels of service, and give grants to the companies, using on net-cost contracts. Competitive tendering became legal in 1994, but this system has so far only been in use in a few areas, representing only approximately 3% of total bus route kilometres. The tendered contracts, and the contracts in Akershus county, are based on an “authority initiative” system, which implies private operators and full-cost contracts. The latter is similar to the form of regulation that is most common in

Denmark, Sweden, Finland and London, popularly known as the Scandinavian model.

Competitive tendering was expected to be widely used after the legal opening in 1994. One possible explanation for the fact that tendering is still quite uncommon is that the amendments contain a clause that gives the companies a right to claim redemption of assets if more than 20% of their production is put on tender each year. This clause is in action until 2002. Another reason might be that compared to Sweden, Denmark and the UK before the privatisation and deregulation took place, Norwegian companies have been quite cost effective. This may have made it easier for authorities to make cut-backs in subsidies and stimulate to cost reductions through the net-cost regime, without entering into tendering agreements.

A common feature of the bus markets in Norway, Sweden, Denmark and the UK is that competition and privatisation have opened large “windows of opportunity” for companies willing to invest in the bus industry, nationally and internationally.

Cost efficiency

For Norwegian bus companies, improved cost efficiency is to some extent a consequence of the mere threat of tendering. Johansen (1999) has shown that different types of contract between county councils and companies have influenced costs. The two most common forms of net-cost contract in Norway have been contracts based on a system of “normalised cost” and later efficiency improvement agreements. There is little doubt that changes in legal and contractual frameworks have led to improved cost efficiency for the companies.

Actual tendering has been used for only about 3 per cent, as mentioned, of bus services. Low revenues from fares, rather than high costs, seem to have determined subsidy levels, somewhat contrary to popular belief. However, research indicates that subsidy levels in many high-cost urban areas are too low to ensure optimal market effectiveness (Norheim and Carlquist 1999).

Both in Sweden, Denmark and Finland substantial cost reductions due to tendering have been reported. However, these reductions, in the range of 10-20 per cent, are significantly lower than the reductions reported in Great Britain.

According to ISOTOPE (1998), one third of the over 40 per cent reduction in bus costs per kilometre in Great Britain can be attributed to reductions in the work force. Another third of the cost reductions is related to reductions in wage rates and fuel prices. The remaining part of cost reductions (13 per cent of total) is thus related to other efficiency gains. This is comparable to savings in Scandinavian countries (notably Sweden), where redundancies and wage cuts have not been accepted to the same extent as in Great Britain.

On average, then, there seems to have been a direct or technical cost cutting potential of between 10 and 20 per cent, measured in cost per vehicle kilometre, for the countries mentioned. This is more than the cost reductions in Norway found by Johansen (1999), but comparable to cost developments for selected urban areas (Norheim and Carlquist 1999). Figure S.1 illustrates developments of cost (at fixed prices) for selected areas:

The general trend is that costs fell quite steeply in the early 1990s, and then stabilised to some extent during the mid-1990s. Great Britain outside London is an exception as costs kept falling throughout the period. However, this figure must be treated carefully. Firstly, the starting point (1990) is chosen rather arbitrarily. Cost reductions between 1986 and 1990 in Norway and Great Britain were substantial, thus reducing the potential for further cost reductions relative to other countries. Secondly, initial cost levels have varied greatly, e.g. costs per vehicle kilometre were known to be exceptionally high in London. Therefore, it is not always meaningful to compare cost reductions in different areas and countries.

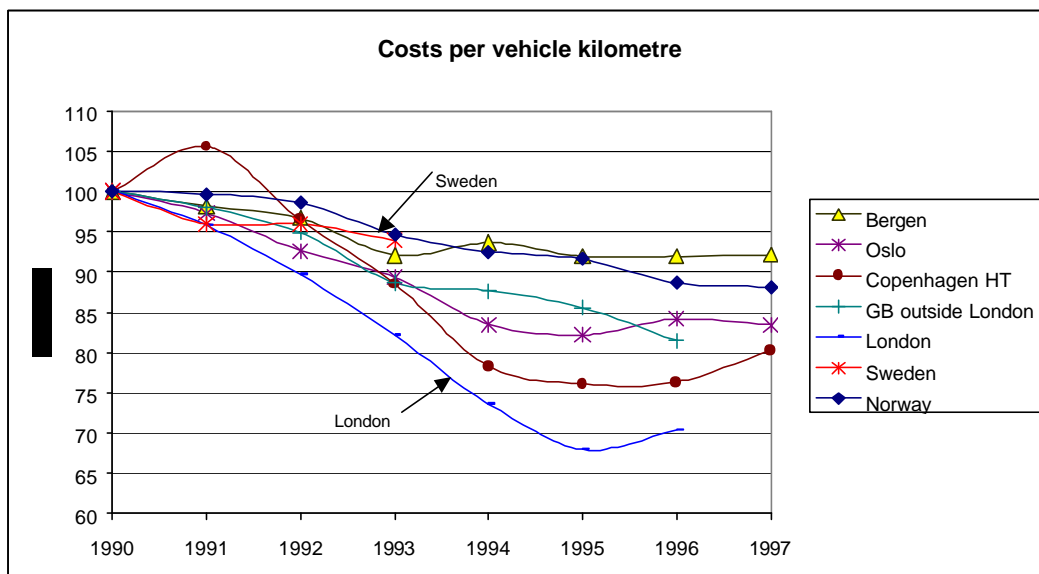


Figure S.1: Indices for costs per vehicle kilometre (1990=100), selected areas¹.

Restructured industry

As a result of company acquisitions and new strategic alliances, the number of bus companies in Norway has been reduced from 200 in 1990 to 105 in 1998. The number of “strategic units” has been reduced from 200 to 82 during the same period. Three of these units or groups now control about 47% of the bus fleet and 57% of total passenger kilometres. In 12 of 18 counties, one or two companies dominate the market by having a market share of at least 80%. In addition, three counties are dominated by three companies, which leaves only three counties with four or more operators having a combined market share of 80%.

We have identified three separate strategic elements of which each of the five major groups has chosen a distinct combination:

- Competitor acquisition
- Company group model (parent company + subsidiaries)
- Alliance formation

¹ Data for Copenhagen is based on tendering prices per vehicle hour

We have attempted to compare the degrees of ownership concentration in different countries, measured by market share (number of buses owned). Although the definition of “total number of buses” varies, data for Norway, Sweden and Denmark are to some extent comparable. We have also included estimates for market shares in Great Britain, although these figures are based on a different definition and may thus not be directly comparable.

As figure S.2 indicates, there is a general trend toward concentration in the deregulated and re-regulated countries. Furthermore, we have studied market shares of each of the three largest companies per country in Scandinavia and Great Britain.

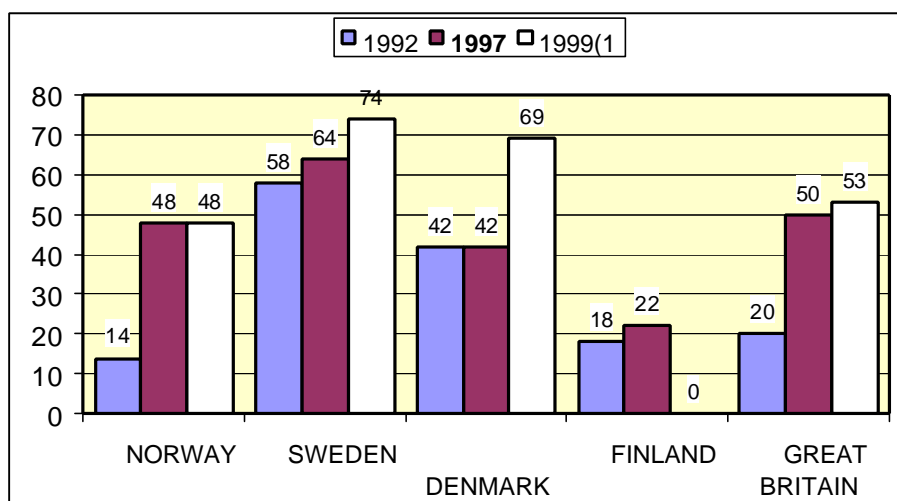


Figure S.2: Market shares for 3 largest companies. Per cent of total number of buses in the nordic countries and per cent of the market in Great Britain.

⁽¹⁾ 1999 data are estimates

The market shares indicated by figure S.3 were updated as per mid 1999. Since then the CGEA has bought a company in the Norgesbuss group, in October it became clear that Norgesbuss will be sold to British Arriva, and that the Swedish and Finnish subsidiaries of Stagecoach have been sold to the Norwegian group Concordia bus. With the purchase of Bus Danmark in the spring and Norgesbuss in the fall the Arriva group has rapidly entered the Scandinavian market. Stagecoach has after a long presence in Scandinavia withdrawn completely from this market. A common feature of the internationalisation of the bus-industry in Scandinavian countries is the domestic process of mergers and acquisitions as a first stage. When large national companies have emerged they have tended to be acquired by international corporations. Linjebuss was purchased by French CGEA, Swebus first by British Stagecoach and subsequently by Norwegian Concordia, and Norgesbuss developed into a large Norwegian company before Arriva showed interest.

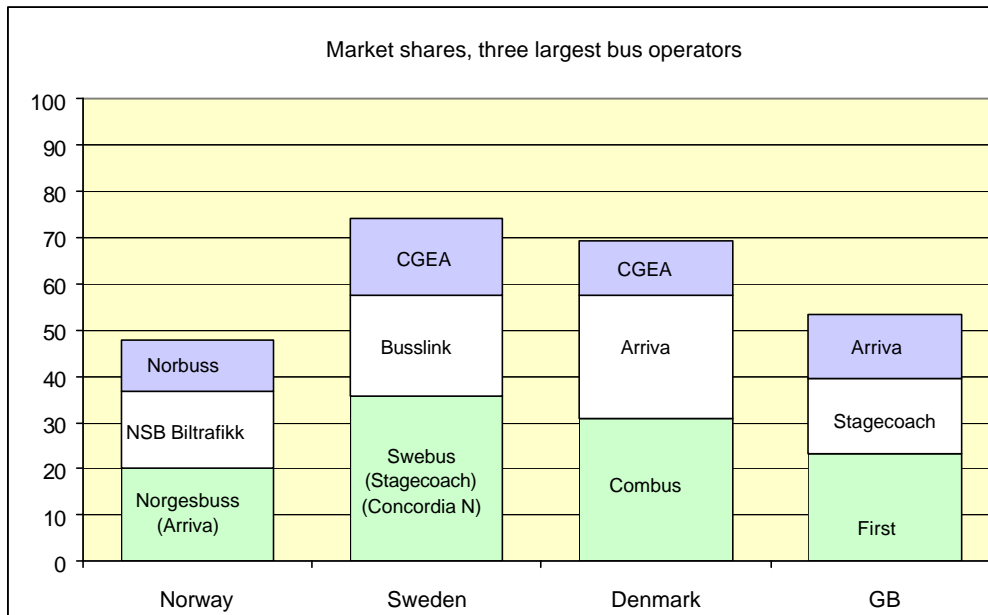


Figure S.3: Market shares of large companies in selected countries

Compared to required profit levels of British bus companies of 15-20 per cent (Bradley and Hibbs 1997), profit levels are low in the Nordic countries, CGEA (Linjebuss) and Swebus showing profit margins of 4 to 6 per cent. Incentives for acquiring companies with low short term profitability might be:

- Learning processes – learning from net cost system such as in Norway
- Positioning – getting ready before the large continental markets are deregulated
- Expected efficiency gains due to economies of scale and scope, allowing higher profitability, obtained by horizontal and vertical integration,
- Oligopolistic gains by strongly increasing market share

Market effectiveness of public transport

Subsidy levels in the Norwegian public transport market have declined sharply since 1996. In sum, annual subsidies have been reduced by 42 per cent in fixed prices over the period 1986 to 1997. For a number of urban areas subsidy reductions have been stronger, and several companies in the largest urban areas now operate with virtually no subsidies at all.

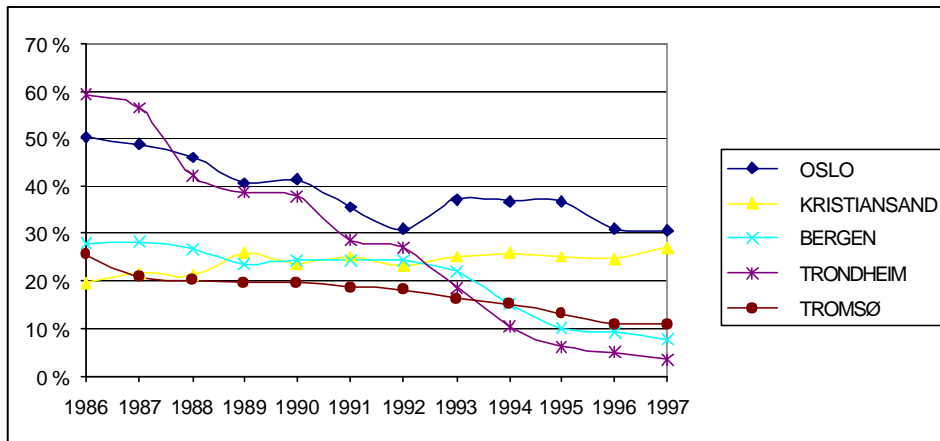
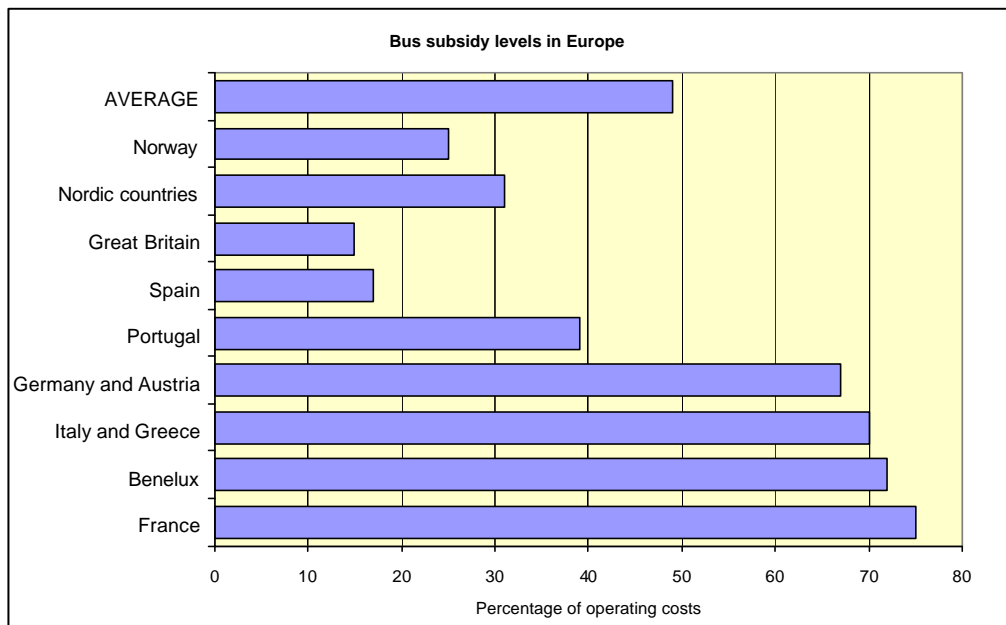


Figure S.4: Subsidy levels (percentage of operating costs) in selected Norwegian cities

Norheim and Carlquist (1999) have analysed to what extent subsidy cuts are related to real efficiency gains for the operator, and then whether or not costs have been passed on to actors or part of the sector. There seems to be a clear relationship between subsidy reductions and fare increases that in turn have led to a decline in the number of passengers. For several urban areas, the subsidy reductions have led to substantial external effects from increased car traffic. There is also some evidence of reduced profitability in the bus companies. As there seems to be less potential for cost efficiency gains in the future, further subsidy reductions may lead to reduced mileage, higher fares, more car traffic and longer waiting time for public transport passengers. In sum, this is likely to reduce the competitive edge of public transport, resulting in a growing negative socio-economic effect.



Source: ISOTOPE (1998), Norheim and Carlquist (1999). The figure for Norway applies to the entire bus network, whereas figures for other countries apply to urban bus transport. Figure for Great Britain includes London.

Figure S.5: Bus subsidy levels in Europe (urban transport)

Compared to other European cities, public transport in Norway is modestly subsidised, as indicated by Figure S.5.

The illustration above documents the spectacular difference in subsidy levels between European countries. Great Britain, the only truly de-regulated country, has a low level of subsidy, the re-regulated Nordic countries generally have subsidies in the mid-range, and regulated countries have high subsidies. Although over-simplified, this illustrates a connection between types of regulatory regime and subsidy levels. However, two important questions must be raised.

- What are the socio-economic effects of reducing subsidies?
- To what extent can one combine low subsidies with maintained governmental influence on the transport sector?

Most countries are attempting to reduce subsidy levels, but on the other hand ensuring a certain minimum quality and supply. The trend seems to point more towards re-regulated regimes, including tendering, rather than the British-oriented de-regulated system. However, as Preston (1999) points out, the number of regulatory options is large, thus the discussion cannot be reduced to a choice between regulated, de-regulated or re-regulated regimes.

New developments: Quality and performance based contract

Although there are good reasons for subsidising urban public transport, subsidies and a strong public involvement in the sector also have certain disadvantages. It is a well-documented fact that subsidies and a lack of competition tend to foster inefficiencies. The reduction in subsidies has led to increased cost efficiency, in addition, our research indicates that the contractual forms used in recent years have not stimulated to market effectiveness. These problems may be partly solved by designing appropriate schemes for distributing subsidies. Enhancing quality on micro as well as macro levels is a core aspect of such schemes. The key idea is to develop contracts that makes each of the parties - government or transport authorities and operators – in their own interest work towards the overall objectives of the public transport system (UITP 1998).

We have suggested introduction of performance based quality contracts as an alternative to conventional tendering agreements. These contracts are designed to provide incentives for operators to improve quality and increase patronage. The idea is to allow operators to maximise profits, and at the same time ensuring a socio-economic optimum, with given political and financial constraints.

Neither the previous subsidy arrangements nor competitive tendering of full cost contracts are reconcilable with the economic interests of society and commercial objectives for public transport companies. Quality-dependent subsidy contracts imply that the responsibility for market initiatives, planning and product development to a large extent is transferred to the public transport companies. At the same time, the authorities must impose stringent conditions and demands for results. Contracts based on this idea was established from 1999 in Oslo, and are planned to be established for the Bergen area and the city of Kristiansand from year 2000.

In Sweden quality measures have been incorporated in the tendering agreements, but rarely as part of an incentive structure. However, contracts for certain urban areas have incorporated quality incentives directly, setting minimum levels of frequency and network density, and giving the operators greater freedom in setting fare structures.

In Denmark, the most innovative contracts has been in the Copenhagen area where all contracts are based on full cost. Route structure and timetables is defined in detail in the call for tenders, but the production can be changed by up to 15 per cent of the route hours during a four year contract period, or up to 7.5 per cent i a single year. Contacts are awarded based on price and quality in the bids. Incentives are based on penalties that reduce payment for cancelled production or breaches of quality requirements and bonuses related to passengers perception of quality. The bonuses range from 1 per cent of the contract sum for companies performing above the bonus level to 5.5 per cent for the best ninth of the operators in the last round of tenders. Companies that do not reach the bonus level must make a plan for improvement, and operators not reaching a minimum level can loose their contract.

In Great Britain, London Transport Buses until 1996/97 operated with tendered contracts to private bus companies on a full cost basis. Operators were paid for operated mileage and contracts could be terminated for poor performance by the operator. New contracts give operators revenue risk and therefore the incentive to increase quality and revenue. Tenderers must submit a bid that complies with the tendering specification, but they may also submit alternative bids that offer advantages to customers.

Outside London public transport is deregulated and establishment of new routes can be freely initiated. The idea behind the privatisation and deregulation of public transport was that the former large and inefficient public operators should be converted to smaller private enterprises, and compete efficiently in a free market. The evolution of the market since deregulation has shown that mergers and acquisitions have led to a concentration in the market with one (or two) companies dominating in each urban area. This may be explained by the due to economies of scale in the transport market. Large companies can offer systems of co-ordinated routes and fares that are easier to use than those of un-coordinated markets with virtual "on street competition". Furthermore, there are economies of scale in production as large companies have advantages with respect to purchasing power, know-how and so forth. To solve problems of local externalities and to promote public transport, agreements known as "Quality Partnerships" between authorities and operators have been established in several areas. In such agreements operators must meet certain standards, such as using vehicles of a specified type, providing comprehensive information to the users, modern fare collection equipment, high levels of service quality and so forth. On the other hand the authorities must provide on-street bus priority measures, modern bus stop and station infrastructure, intermodal and bus/bus interchange sites etc. As a next step, the British government has suggested Quality Contracts for bus services, involving operators bidding for exclusive rights to run services on a specified route or group of routes. Such contracts would be based on local authority service specifications and performance targets, and thus be similar to the London model (Preston 1999).

In many senses, the British Quality Contracts will resemble the current net-cost regime in Norway. There seems to be a certain convergence of contractual

developments in Scandinavia and Britain, as net cost contracts with incentive elements are gaining popularity among authorities as well as operators. Gross contract regimes such as the HT system may be highly complex, and although experiences are positive, it is reasonable to believe that detailed quality measurement systems are best applied to large urban areas.

