

**Summary:**

# Competition on the Norwegian Railway Network

## Background

On commission from the Ministry of Transport and Communications, the Institute of Transport Economics (TØI) has analysed alternative strategies for facilitating further competition on the Norwegian railway network.

Incorporation of several EEA directives into Norwegian law in the 1990s has already opened up the railways to competition in several areas. For example, international combines of railway enterprises engaged in transnational rail transport are permitted to use the Norwegian railway network. In certain cases we have also gone somewhat further than the requirements of the EEA directives as regards permitting competition on the Norwegian railways. For example, the "Freight Freeways" collaboration establishes corridors for goods transport through Nordic and other European countries in which there is open competition between private and public freight carriers. The Østfold, Kongsvinger and Ofotbanen lines are now parts of such corridors.

Norway needs to utilise the capacity of its railway network better, through embracing whatever may exist in the way of unused commercial opportunities. This is an argument for admitting players who spot such opportunities. It will be particularly valuable to exploit the opportunities that European liberalisation offers for improved transport services to the Continent.

Even if a certain amount of competition is now allowed on the Norwegian railway network, Norway nevertheless contains few transport companies in addition to the Norwegian State Railways, NSB. Malmtrafikk AS is engaged in carrying iron ore on the Ofoten Line between Kiruna in Sweden and its port, Narvik in Norway. NSB's wholly-owned subsidiary, NSB Gardermobanen AS, runs the rail shuttle to the new Oslo airport, in part on its own new track. In addition come some more hobby-like and museum rail operations.

## Allocation of track capacity between several operators

Track capacity restricts the volume of train operations that can be run on the railway network - or more properly, that *ought* to be run, for the sake of efficiency. The primary constraint on capacity is the high proportion of single-track line. There are also capacity problems on double-track in and around Oslo. Scarce track capacity in the Norwegian network is currently allocated between different types of

train in accordance with administrative principles, via the annual scheduling process in the Railway Administration.

In a liberalised system with several operator companies running trains, in our opinion the allocation of scarce track capacity should gradually be made more market-based. The aim is to distribute the “property rights” (that is, the right of use of a time slot for e.g. four years) between the operators in an economically efficient manner.

Such a market-based allocation of track capacity can be done either through an auction system or by selling the right of use of a time slot for a fee. Both options will be of an experimental nature and must be introduced gradually. Our recommendation is to sell the right of use of a time slot for which there is competition, for a fee that will internalise the external congestion costs that use of the time slot involves. If the final allocation is to yield the optimum result, it would be an advantage if these use rights are made tradable. The result would then be an allocation that approaches the theoretical optimum, or in other words in the vicinity of what might be achieved through an ideal competitive tendering system. We would simultaneously recommend that such a system be introduced gradually, initially by charging a fee on new services that are to be incorporated into an existing timetable, and by keeping services subject to public purchase outside this market system when a new timetable is to be planned. At the same time, we can also experiment with an auction system in individual and isolated portions of the network.

The fee should (approximately and on average) correspond to the increased operating costs imposed on other operators in that one departure increases train running times for adjacent departures, plus the increased travel time costs imposed on their customers for the same reason. The system must, however, be such that the annual fee for using a time slot and scheduling a departure is less if this departure actually leads to a better service (increased frequency) for the customers of other operators. Such a fee system has been worked out in the project (Annex 5). We need however verification that it correctly reproduces the time losses for other operators and their customers (Annex 7).

This track access fee should normally not be modified to take account of mispricing on the roads (Annex 6).

## **Competition on the track**

### **Do we want it?**

Competition on the track means simply more operators on the Norwegian railway network. The services they offer need not necessarily be oriented to the same market segments. If they do, we can speak of competition *in* the market. There is much to be said for trying to achieve competition *in* the market in certain market sectors, inter alia that customers will benefit from greater frequency.

NSB BA is currently competing with road and other kinds of transport on most travel and transport markets. It is possible that this competition will sharpen with the introduction of competition *in* the railway market, and that this will contribute to enhanced cost-effectiveness for NSB. The same effect may, however, be achieved by other means, such as permitting increased competition from express coaches.

Competition exposure provides regulatory authorities with better information about how much it really costs to run a railway service. As owner of NSB, as purchaser of railway services, and in connection with planning and regulation of the railways, the Ministry of Transport at present lacks the opportunity to compare NSB's information with other information, and to a large extent must simply accept what NSB tells it.

In addition to creating competition *in* certain sectors of the market, allowing more operators onto the tracks may mean entirely new services for the public. In the short term this is the most important effect. Such opportunities are emerging already from the Freight Freeways collaboration.

### **Can we get it?**

However, in some cases the cost structure of production of railway services may be such that unit costs rise when more operators enter (a natural monopoly), or that unit costs rise if it is no longer possible to combine services in several market sectors (economies of scope). Only practical experience can provide an answer as to whether these phenomena will hamper or even prevent competition *in* the markets for railway services.

There is a danger that, even if the tracks are formally opened up for competition, various kinds of barriers to entry will persist. These might include:

- *Sunk costs* in connection with investments in rolling stock and other one-off measures at entry, such as training, marketing and so forth.
- Formal qualification requirements or other obstacles to acquisition of specialised labour such as drivers, or difficulty recruiting managers with experience of the industry.
- Problems with access to networks such as travel agency systems.
- Threats of *predatory pricing* from NSB or other big operating companies.
- Possible informal links between the Railway Administration and NSB.
- The tender terms, that is, service schedules, capacity, quality requirements etc., can be excessively based on NSB's current services.

Several of the barriers to entry listed above are connected with the current complete dominance of the Norwegian railway market by NSB.

If it is wished to reap the benefits of liberalisation, the gradual introduction of an efficient system for allocating track capacity to those who are interested must be combined with systematic work to reduce these entry barriers. We consider these the two most important elements in a strategy to open up the railway track system to competition. At the same time the situation must be kept under continuous observation so that any unintended negative effects of the systems introduced, or of the splitting of services between several operators, can be detected and corrected.

### **The pace of liberalisation**

There may be reason to treat goods and passenger traffic differently with regard to the pace of liberalisation.

Conditions now appear favourable for further opening-up to competition on the freight side. The prime challenge for the Railways Administration is listening to new players, as regards the need for maintenance and development of the permanent way and terminals. The bulk of the benefits of opening up for competition on the freight side may lie in greater efficiency and better market adaptation and the environmental benefits of transfer of freight transport from road to rail.

For passenger transport, it may be expedient to proceed more slowly. On the one hand we have seen that competition *in* the markets can provide customers with better service and the authorities with a better basis for regulation. On the other hand, it may lead to poorer integration in areas such as ticket and information systems, coordination of schedules and the opportunity to adapt the Railway Administration's infrastructure measures to the operators' operational and investment plans. NSB and its employees also require long-term and predictable framework conditions.

It may be expedient to wait and see, watching the effects of deregulation in for example Sweden and the UK. It will probably not be possible to derive useful lessons from these countries until a few years have passed, and such experiences will be beneficial to further work in facilitating competition on the Norwegian railway network.

For Sweden Nilsson (1992) argues that a gradual transition to a competition system may lower the barriers to entry in the railway sector. In a transitional phase, new traffic companies can slowly build themselves into large-scale enterprises. A gradual transition could, for example, encourage the growth of a market for second-hand rolling stock and new maintenance and repair workshops. In our opinion this is a very important point of view.

None of this need prevent us starting the facilitation of competitive exposure in limited areas right now, even for passenger traffic.

### **Public purchasing out to tender?**

The market system for allocation of scarce track capacity between all interested operators must not be confused with a market system for allocating the right and duty to operate a well-defined package of railway services. Such a system may be called competition *for* the market. An example of the latter is auctions and competitive tendering for the right to operate parts of the services subject to public purchase. Since we have proposed to keep publicly purchased services outside the market system for allocation of track capacity, it follows that the operator who wins the right to operate a publicly purchased service has thereby acquired the right of use to well-defined time slots.

As will be readily understood, the question of whether tendering is an expedient solution to the problems of cost-effective operation of such services, and how they are to be practically implemented, can to a great extent be studied in isolation from the more general question of allocation of track capacity in a liberalised railway market.

If it is desired to expose the state-purchased passenger transport services to competition, this should be done by competitive tendering. With a competitive tendering system it is best to split up the route network and invite tenders for

“product packages”. Public procurement agencies need considerable market expertise to handle such competitive tendering systems. However, much of the market initiative should be allowed to remain with the train companies - that is, train operation should not be closely regulated by the purchasing agency. Caution should be exercised when splitting the network into tender packages, inter alia to ensure exploitation of synergy effects on the materiel and personnel sides, plus the necessary coordination on the schedule side. It may be expedient to transfer purchasing of some rail products to the county councils. Buses should be allowed to compete with trains for publicly purchased passenger services.

In this report we have not taken a position on whether we should expose to competition the passenger products that NSB finds commercially profitable, but the advantages and disadvantages of such competitive exposure are discussed. Norwegian railway legislation now allows other traffic companies access to stretches where NSB has withdrawn rail services. In our opinion, this provision should be changed to cover also stretches where NSB supplies insufficient services. For example, there may be cases in which NSB’s services currently cover only part of the day or week. The biggest gain from permitting this and from exposing long-distance trains etc. to competition will probably be a better service to the travelling public and a greater diversity of rail products.

## **Organisational consequences**

In the short run, only adjustments to the division of responsibility in the railway sector are necessary to facilitate further liberalisation, particularly if we only wish to allow competition on the goods side. A number of measures have already been taken to facilitate such competition, especially since 1990. Some of these preparations have not had competition as their explicit goal, but have nevertheless favoured a future liberalisation. Norway is among the European countries that have made the most progress as regards essential preparations for rail competition.

What organisational changes that may be required in the future depends on the model of competition that is chosen. It will not be necessary to establish new bodies in the short run, although this depends in part on the pace of liberalisation and how many new operators that want to enter.

## **The Ministry**

The Ministry of Transport have many different responsibilities in the rail sector. It is responsible for the overall political strategy and the regulatory framework in the sector, including regulatory issues, investment budgets and policy, and the purchase of passenger services. It also acts as owner of NSB. In addition to these strategic responsibilities, it also is responsible for many day-to-day tasks in the rail sector. For example, it is to make final decisions in case no agreement is reached in track allocation disputes, it issues licenses and traffic rights, and is responsible for the system and level of track user charges.

Further liberalisation of access to the Norwegian railway system may aggravate some problems caused by the many roles that the Ministry has in the rail sector. Furthermore, it can be expected that the Ministry must take on even more tasks as appeal institution.

The use of competitive tendering will probably mean substantially more work for the Ministry in preparing and carrying out tenders and monitoring contracts. It may be useful to establish a public company or a government body responsible for these tendering processes. This body might also manage any rolling stock which the state might acquire from NSB for hiring out to the operators of publicly purchased services. It reports to the Ministry. Gradually, the responsibility of this procurement body might be extended to cover other publicly purchased transport services, especially air transport services.

A separate body for state purchases of transport services may alleviate the problems created by the Ministry being both the owner of NSB and a buyer of rail services. Another way to achieve the same goal is however to transfer the ownership of NSB from the Ministry of Transport to another Ministry.

### **The National Railway Inspectorate**

More operators on the tracks will increase the tasks of the Railway Inspectorate of monitoring safety in the companies.

It might be convenient to extend the responsibilities of the Railway Inspectorate to include more of the functions that the corresponding organ in the post and telecommunication sector already has. Today, the Railway Inspectorate is responsible for monitoring safety and make sure that operators and the Rail Authority complies with railway law and regulations. They also issue permits to run railways. The corresponding organ in the telecommunication sector has the same responsibilities, plus regulatory and international responsibilities. Its aim is to contribute to cheap and high quality post and telecommunication services. In the same way, the Railway Inspectorate might take on responsibilities for user interests.

The Railway Inspectorate might also take on other tasks that become more urgent when the number of rail operators increase, such as coordination of schedule information and ticketing systems, if this is not done voluntarily by the operators themselves. It might be an appeal institution in conflicts between operators and between operators and the Rail Authority. It should however continue to be a small organ and rely on outside competence.

### **The Rail Authority and NSB**

Today, NSB owns facilities at stations and terminals that ought to be accessible for all operators. Such facilities are however hired out to the Rail Authority at a price just covering costs. For stations, this comprises roads, parking facilities, pedestrian areas and parks around station areas, access through buildings, waiting rooms, roofs on platforms etc. For freight terminals, it comprises access roads, some loading and unloading areas and yards for general use. When splitting up NSB and determining the interface between NSB and the Rail Authority, it was thought to be more cost efficient to keep a united property management (St prp nr 2 (1996-97)).

To avoid a situation where NSB uses these facilities to bar entry to newcomers, they are to be hired out to the Rail Authority, who also lays down the principles of their use. Contracts between the Rail Authority and NSB concerning these facilities have now been signed.

NSB's ownership of these facilities creates a challenge to the Ministry to

- see to it that the Rail Authority does not pay more than the cost for the hire of them, so that NSB does not earn a rent that can be used for cross-subsidiation purposes.
- see to it that NSB does not exert its ownership to the detriment of other operators, for example in its maintenance policy.

Because there is little competition on the railway now, it is hard to judge if such practices are likely to occur. But there may be a potential for it. The Rail Authority may reduce or eliminate it through its active management of the facilities.

Should it turn out that the system of managing these facilities does not work as intended or is hard to establish, it might be better to transfer them to the Rail Authority. At present, there is no need for such a move.

An essentially new task for the Rail Authority would be to take into account the interests of other companies than NSB when planning for maintenance, investments etc. (track and terminals). We leave it to the Rail Authority to decide how this is to be done in a way that minimises conflicts and appeal cases and provides an infrastructure that serves all the operators and their technical solutions. The same goes for changes in the time-tabling process to incorporate purchases of track access rights or time slots.

With a view to a future of competition in the passenger transport market, the accounts of those of NSB's business areas that are exposed to competition should be separated from the accounts of the areas that are not. A split-up of NSB itself is not studied in this report, but in Sweden, a split-up of SJ has been studied in SOU 1997:35. The study argues that SJ even today is too small to exploit fully the economies of scale, and that consequently, passenger services should not be split up. However, freight and passenger services should be split up. We recommend a similar analysis in Norway, but see no immediate need for a split-up to achieve rail competition.

If vertically integrated rail companies like NSB Gardermobanen AS are to be permitted after a free access regime has been established, there must be an organ outside NSB that decides on charges for the use of this infrastructure, while the Rail Authority may take on responsibility for time-tabling and track capacity allocation on this part of the network. This accords with the proposal of the European Commission (Proposal for a Council Directive to amend Council Directive 95/19/EC), and will help ensure non-discriminatory and efficient use of the network. Regards for the timetables of the airport shuttle trains can still take first place in timetable planning for this stretch of tracks, as it was built for the shuttle trains. This also accords with the EEA regulations.

## **How our proposals relate to the EEA regulations**

The opening up for competition on the tracks that is already built into Norwegian laws and regulations, and the proposals for further liberalisation in this report, both broadly accords with current EEA regulations and the proposals for further

liberalisation set forth by the Commission. There are however some possible areas of conflict.

Firstly, our proposal to allocate track capacity by selling time slots for a track access fee means that we are in conflict with the proposal of the Commission, which states that time slots can only be awarded for the period of one timetable plan and are non-tradable. Secondly, we find problems with the Commission's proposal that track user charges should go to the infrastructure manager. Such a system may create unwanted incentives if the responsibility to allocate capacity is also with the infrastructure manager. Ideally, track allocation should serve to optimise the congestion costs and therefore the congestion charges. If however the Rail Authority is partly funded by congestion charges, it is not obvious that the objective of optimal charges is getting the proper attention.

Receipts from the track user charges currently go to the Treasury. If the proposal to amend directive 95/19 is passed, then, this will have to be changed.