



RIKSREVISIONEN

Summary:

The Bothnia Line and the railway along the Norrland coast

RiR 2011:22



SWEDISH
NATIONAL AUDIT
OFFICE

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The Bothnia Line and the railway along the Norrland coast

– how has it turned out and what did it cost?

Summary

The Swedish National Audit Office has audited the Bothnia Line, one of Sweden's biggest infrastructure projects. The Riksdag made the decision to build the Bothnia Line in 1997. The intentions were to provide more effective transport services in Norrland and to improve the competitiveness of the region's economy. The audit has focused on the whether the purpose of the line will be achieved and what it will cost the State.

Background to the audit

Motive: The Bothnia Line is a line between Umeå and the Ångermanälven River, but its main value lies in its role as a part of the railway line along the Norrland coast. The Bothnia Line therefore depends on surrounding lines in order that traffic

services will function. In a pre-study to the audit, the Swedish National Audit Office found that the Bothnia Line had been delayed and was more expensive than estimated. There were also indications that additional investments were needed in order that the Bothnia Line could be used in the way intended by the Riksdag. This places a burden on Government appropriations for rail investments, possibly at the expense of other projects, as more investments need to be made in order that traffic services can function.

Purpose: The purpose was to perform an audit to ascertain whether the Government, the Swedish National Rail Administration/Swedish Transport Administration and Botniabanan AB have carried out the planning and construction of the Bothnia Line in an effective way in order that the intentions of the project are achieved. The costs of achieving these purposes were also investigated. The purpose includes examining relevant evidence, both before and after the decision on the Bothnia Line.

Implementation: In order to examine whether the purposes of the Bothnia Line have been fulfilled, the Swedish National Audit Office started by examining the accessibility of the Bothnia Line and the surrounding lines, as well as journey times between various locations. The term 'accessibility' relates to the capacity of the lines to transport a given number of trains and to the railways maintaining a given technical standard, for example in terms of the maximum permitted weight of wagons on goods trains. The outcome when the line is operating with full-scale traffic was compared with the intentions that formed the basis of the decision to build the Bothnia Line. Both the quality of the data and supporting documentation before the decision and the effectiveness of subsequent planning have been examined. Calculations have also been performed of the scale of socioeconomic benefits not achieved as a consequence of the fact that there is not the capacity on the section of line along the Norrland coast for all of the goods trains in the traffic schedule, and that actual journey times have become longer.

Finally, the cost of building the Bothnia Line and of implementing investments in surrounding lines, which according to the Swedish National Audit Office are necessary for the Bothnia Line to function, has been analysed and summarised. Interviews have been conducted with representatives of the Swedish Transport Administration/Swedish National Rail Administration, Botniabanan AB and the Government Offices of Sweden, and documentary studies of relevant data and supporting documentation for decision-making have been conducted.

The results of the audit

The intentions of the Bothnia Line are not being fulfilled. The Bothnia Line depends on additional investments in the surrounding railway system for it to function as intended. While awaiting the completion of the upgrade to the Ådal Line in December 2011, only a small number of regional and goods trains are using the Bothnia Line.

The lack of capacity on the Ostkustbanan line is reducing the potential of the Bothnia Line to improve goods transportation between northern and southern Sweden. Measures to increase capacity will not be completed until 2015/2016, although not on a scale that will permit traffic to the extent desired. Furthermore, there will continue to be restrictions on goods traffic on the lines surrounding the Bothnia Line in the form of steep slopes and poorer bearing capacity.

It will not be possible to achieve the expected journey times for express and regional rail traffic. The journey time between Umeå and Stockholm will be approximately 6.5 hours, compared with the five hours quoted by the Swedish National Rail Administration before the Bothnia Line decision. There is also a major difference between expected and actual journey times for regional traffic.

The data and supporting documentation on which the decision was made was not correct. The Swedish National Rail Administration provided evidence before the Bothnia Line decision that was deficient in many respects. According to the Swedish National Audit Office's calculations, the traffic schedule that the Swedish National Rail Administration envisaged on the Ostkustbanan line following the opening of the Bothnia Line involves so many trains that it would not be achievable in practice. This is true even disregarding the increase in traffic that has taken place since the Bothnia Line decision. The Swedish National Rail Administration should have been able to predict and report this before the Bothnia Line decision.

The journey times in the Swedish National Rail Administration's basis for decision-making were unreasonably short. There are underestimates unrelated to changed conditions for express trains to the order of more than 30 minutes between Stockholm and Umeå. For regional trains, the underestimates total more than 35 minutes between Sundsvall and Umeå. The Swedish National Audit Office considers that the scale of the underestimates is remarkable, especially in view of the fact that shortly after the Bothnia Line decision the Swedish National Rail Administration revised its journey time forecasts significantly upwards.

The total cost of realising the Bothnia Line's traffic schedule will be at least SEK 26 billion, which is more than 140 per cent higher than was estimated before the Bothnia Line decision. The reason is partly that the Swedish National Rail Administration omitted necessary upgrade works in the surrounding network from its estimate, and partly that the projects in the area have become significantly more expensive. The increased costs are the result of both increased social requirements and underestimated costs. Previous audits by the Swedish National Audit Office have dealt with the problem of the "eye of a needle" phenomenon, which reflects the fact that transport administrations have an incentive to keep down estimated costs ahead of decisions on infrastructural investments in order to pass the decision-making process.

The Government made an attempt to quality-assure the Swedish National Rail Administration's basis for the Bothnia Line by mandating a Government committee to investigate the Bothnia Line. Even though the investigation did not reach the same conclusions as the Swedish National Rail Administration, the Swedish National Audit Office believes that the Government did not provide the investigation with the scope to perform a sufficiently independent assessment.

The omission of necessary consequential investments for the Bothnia Line and the cost increases for the Bothnia and Ådal Lines have contributed to the appropriation being eroded. The appropriation has been burdened with costs that arose as a consequence of the decision to build the Bothnia Line, but that were not included in the basis ahead of the decision. It may have meant that other projects were given a lower priority and either postponed in the government's infrastructure plans or removed entirely.

The Swedish National Rail Administration and the Government lacked a system perspective in their planning. One reason why the traffic schedule for the Bothnia Line will not be

realisable is the Swedish National Rail Administration's planning, which has not been effective. The Bothnia Line depends on surrounding lines to be able to function effectively. It is therefore particularly important that planning be coordinated, i.e. that there is a system perspective. The physical planning of both measures to increase capacity on the Ostkustbanan line and the upgrading of the Ådal Line have, however, been slow and have not encouraged a scheduled matching of investments with the Bothnia Line. The financial planning has also resulted in a delay in the completion of the projects. The Ådal Line was also upgraded to a lower standard than is currently applicable in large parts of the rail network, and still has steep slopes preventing heavy goods traffic.

The Government's governance has been passive, which in the view of the Swedish National Audit Office is associated with a lack of system perspective. The Government has not taken the view that the projects along the Norrland coast are connected and need to be coordinated. The Government has not acted with sufficient speed, for example to solve the problems that arose when upgrading the Ådal Line.

The information remains inadequate. The Swedish National Rail Administration/Swedish Transport Administration must provide the Government with information about investments that are under way and that have been completed. The Government must provide the Riksdag with information about the Bothnia Line and its progress. The Swedish National Audit Office believes that the information from the Swedish National Rail Administration/Swedish Transport Administration and the Government about the Bothnia Line and the railway along the Norrland coast has been inadequate.

The Swedish Transport Administration recently performed a follow-up calculation of the costs of the Bothnia Line. This follow-up calculation contains errors, which indicates that there continue to be shortcomings in the information being provided to the Government.

The Swedish National Audit Office has also studied the North Bothnia Line, a possible extension to the Bothnia Line. The joint forecast for the 2010-2021 infrastructure plan includes a precondition of an investment of SEK 10 billion in the Ostkustbanan line. This is of major significance for the traffic schedule on the North Bothnia Line, about which the Government has not been provided with explicit information.

The Government's information to the Riksdag has been project-based and related primarily to the Bothnia Line. The Government has therefore not informed the Riksdag that the traffic schedule that existed before the Bothnia Line decision will not be realisable within the near future. There are also shortcomings in the Government's information about the Bothnia Line and its total costs.

Recommendations

As a consequence of the shortcomings identified, the Swedish National Audit Office makes the following recommendations to the Swedish Transport Administration and the Government respectively.

To the Swedish Transport Administration

Develop the definition and demarcation of projects. The Swedish Transport Administration should make sure that infrastructure projects are defined and demarcated so that the total cost of achieving the purposes is also made clear to the decision-maker.

Develop analyses in the infrastructure plan. The Swedish Transport Administration should develop analyses in the infrastructure plan from a system perspective. The infrastructure plan should clearly state the consequences of different extension schemes to major infrastructural investments that depend on one another.

Improve quality assurance and follow-up. The Swedish Transport Administration should quality-assure data and supporting documentation ahead of decisions on infrastructural investments and follow up after completion.

Make sure that documentation is retained. The Swedish Transport Administration should make sure that data and supporting documentation for decision-making on infrastructural investments are retained in order to enable follow-up to take place.

To the Government

Develop the directive for the infrastructure plan. In the directive for the infrastructure plan, the Government should specify that definition and demarcation of infrastructural projects be implemented in a uniform way so that the total cost of achieving the purposes is also made clear to the decision-maker.

Provide more active governance. The Government should provide more active governance in ongoing infrastructural planning, so that projects that have been linked together in the planning process can be implemented and utilised effectively.