The Reluctant Infrastructure Manager
70 Years of Government Ownership of Transport Infrastructure in Sweden

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LITERATURE
Abstract

Governments have a choice whether to intervene in the transport infrastructure sector to manage, finance and organize and sometimes own the assets of the sector or to rely on markets and private sector actors for the provision of these systems. In Sweden, like in most other countries, the government has, since the 19th century, gradually taken a more active role both for railroads and roads, including most of the roles outlined above.

From the 1840s, railroads and a more modern road system developed based on a mix of government and private/local government initiatives. A step towards centralization was taken in the 1930-40s, as the private- and local government-owned railroads and rural public roads, a majority of the total system, were taken over (nationalized) by the State. The government still owns these assets.

In this paper, the development of railroad and road infrastructure is analyzed based on a co-evolutionary perspective, including the influence of technology, economics and politics. The perspective is used in order to facilitate an understanding and explanation of the successive steps that led to the decision to nationalize railroads and roads. The following time periods up to 2010 are also analyzed with the perspective as a relief.

Based on a study primarily of the public documents of the time it is argued that the nationalization can be seen as a more or less logical step in a process of centralization that had been going on since the mid-1800s. Business economics rationality and cost reduction were important arguments for nationalization. Arguments in favor of the nationalization were that it was seen as a modernization of the sector, which also allowed for the introduction of new technology and a reduction of differences in road taxes. Welfare economics reasoning and discussions on natural monopolies were, however, not the focus.

It is further argued that the government waited for some time to take the final steps to nationalize the railroads and roads. The government entered the scene as a rather reluctant infrastructure manager.

The Parliament’s 1963 decision on transport policy, which is generally seen as among the most important policy decisions in the sector since the 1940s, might, it is argued, have been given a too important role. However, it is argued that the proposals put forward by the 1944 Transport Committee, which were never formally decided upon, were perhaps more influential. These proposals were largely market-friendly within the framework of the government ownership and financing model. The railroad and road systems should be run more or less as private businesses within this framework, with a focus on business economics efficiency, a full cost responsibility, and a competition view on the transport market.

The transport policy decision was formally approved in 1963, and it was largely based on the principles of the 1944 Transport Committee. These policies opened for a further restructuring of the transport sector, including transport infrastructure. The road system was expanded, while the railroads contracted, suffering from high costs and a decreasing market. There was, however, a gradually growing criticism towards both the planning practices and new construction programs for the road system, and against the effects the policies seemed to have for the railroad system.

The transport polices were changed during the 1970s. The 1979 Parliamentary decision on a revised transport policy brought a formal end to the policies based on market forces, competition and business economics, all of which were features of the 1963 decision. The new management philosophy was based on welfare economics, which should be the new basis for transport infrastructure and transport policies when it came to planning, management and pricing/taxation.
An interesting phase in the historical development of transport policy was a return in the 1988 Parliamentary decision to a goal structure closer to the earlier (1963) formulation of transport policies. In a following decision in 1998, another turn was made, which has since established welfare economics as the basis for transport infrastructure policies.

The principles set in the 1940s, with a firm base in a “cost responsibility principle” and a business economics perspective on transport infrastructure combined with government ownership and financing, was finally shifted to more of a welfare economics basis during the 1980-90s.

This was, it is argued, a way of reflecting a more active political agenda with new goals for transport policy. The policy shift was combined with deregulation and some privatization steps from the 1980s onwards. If the former policies might be seen as expressing a contradiction between government ownership and business economics, the new policies made a contradiction between deregulation and more developed and wider political goals in combination with welfare economics obvious. The government might be seen having gone from reluctance to contradiction as the basic stance of its policies as owner of railroads and roads.
INTRODUCTION

1 Introduction

The 1920-30s was a time of major change in railroad and road transportation in Sweden. The number of buses, cars and trucks quickly increased and transport flows on roads changed from mainly local flows to higher proportions of regional and national flows. This development led to a challenge for the railroads, with strong competition, and called for a change in the provision and management of both railroad and road infrastructure. The government’s role, which had evolved gradually since the mid-19th century, was also challenged. The division between private sector and government responsibility, and the balance between national and local public sector responsibility, was to change in the coming decades.

In a current research project (PhD), the role of the Government of Sweden for the provision of primarily railroad and road infrastructure has been studied. The government’s changing role since its mid-19th century situation, with a fairly limited role, into the present wider role is analyzed through studies of different aspects of transport infrastructure policy in Sweden, focusing on the choice between public sector and private sector provision of infrastructure systems. This paper provides a broad historical background to the thesis, for which more specified research articles have been prepared in combination with a comprehensive text covering the different issues raised in the separate articles.

One of the interesting aspects to analyze is the background of the decisions in the 1930s and 40s to nationalize the large parts of the rail and road system that were privately and locally managed. This is interesting, it is argued in this paper, since it marks a departure from the government’s earlier more cautious policy and reluctance to get involved more deeply since the mid-19th century with regard to both rail and road.

For the railroad system, nationalization broke with the government’s policy of the mid-19th century to focus its responsibility on national rail lines, while local and private corporations were responsible for regional and local rail lines. In the road sector, the decision to nationalize the rural public road systems marked a change in the balance of the system from the fundamentally local road district organization to a centralized government agency structure. This was also a major rebalancing of the distribution of powers between the government and the local (rural) governments. The nationalization of rail and road represent a step in the centralization of the Swedish transport infrastructure sector.

In Part 1, the paper aims to understand and analyze the arguments that made the government change its previous policies from a more liberal and non-interventionist stance to a more active policy. Was it based on economic reasons such as natural monopoly theory or rather the willingness to reap scale effects? And to what extent does technology play a part in understanding the change? Finally, arguments related more generally to politics and socio-cultural aspects could also be the basis for understanding the government’s changed view. These different aspects of the development are captured by a co-evolutionary perspective, which is one theoretical basis for the analysis in this paper.

The co-evolutionary perspective, where the connections between technology, economics and politics are outlined as a basis for understanding the development over time of the road and railroad systems, is presented in Part 1. The perspective includes the dichotomy between whether transport infrastructure should be provided by the public sector or by the private sector.

1 In this paper, nationalization stands for a central government takeover of assets held either by private sector or local government actors.
This perspective echoes the long-standing discussion in economics around whether it is fruitful to analyze the economy as being separated in a private versus a public arena. This dichotomy has been applied when discussing the existence of private goods and public goods, and the connected market failure and government/policy failure situations.

Next, in Part 2, the development of the government’s transport infrastructure policies as owner of the systems are analyzed during the period 1945-1963. The growth of the road system is contrasted against the consolidation and downscaling of the oversized railroad system. Financing issues, at the core of the political discussion at the time, are discussed in more detail.

Part 3 focuses on the turn to welfare economics as a gradually stronger source of influence in transport infrastructure policy and practice through the 1970s. The reasons for the policy change are discussed and analyzed and the business economics view dominating in the early years of government ownership is contrasted against the later more dominant welfare economics perspective.

Part 4 of the paper presents conclusions and summarizes some of the main findings in the paper.

Methods and sources

The paper is primarily based on a study of the original official documents from the time. These are the reports, seen as reflecting the most important aspects of the studied aspects, from government committees, the government’s proposals to Parliament (government bills) and the Parliament’s deliberations, reflected in Parliamentary Standing Committee statements.

This is to say that not all of the committees working with transport infrastructure-related issues are reflected in the paper. Neither has it been possible in all cases to follow the entire steps in the decision-making process. Some committees have been left without action from the government and in other cases the response has been so slow and entangled with other questions that the trace has been difficult to follow.

The paper is thus focused on the analysis and discussion leading to the decisions to nationalize railroads and roads as it is reflected in the official documents. The information contained in these documents does not necessarily give the complete background to the decisions, but the focus here is primarily to reflect on what have been the official and publicly discussed arguments that pushed the government to make its nationalization decisions. These impressions are reflected to some extent towards research in the field that also encompasses a broader set of sources.

\[^2\] In this paper, the term “business economics” is used for a management philosophy based in the area of financial economics or business administration. The term “welfare economics” is used for a management philosophy based on economics, where cost-benefit analysis is a common method used in transport infrastructure management and policy.
Government’s role for transport infrastructure – a co-evolutionary perspective

Transport Infrastructure assets have traditionally been seen as difficult to provide on market-like conditions. They have often been seen and discussed as natural monopolies. Mosca (2008) presents a historical background to the concept and the use of natural monopoly theories. Mill had already used the term in 1848, the French economist Walras applied it explicitly to railway networks in the 1870s, and the late 19th-century economist R.T. Ely named an article “Natural monopolies…”. Marshall discussed the same concepts but proposed that they be discussed as “indivisible industries” rather than as natural monopolies. The idea of treating transport infrastructure as something specific in the economy had clearly been discussed long before the nationalization in Sweden took place.

At this stage, the idea of dividing the economy by different arenas or spheres was still not dominating, even if more private and collective or communal aspects of theorizing around social systems had been part of theoretical thinking for some time. The modern view on public and private arenas perhaps evolved out of a search for analytical tools, which could explain the functioning of the state and parliamentary systems within the evolving public finance field. How could the existence of the different spheres of the economy that seemed to be existing over time–private and public–be understood from an economic perspective?

Schumpeter (1918) discussed these issues in relation to the need for recapitalization of the Austrian state following World War One in a famous article wherein the dichotomy between the state and the private sphere is outlined. The development of welfare economics in the first decades of the 20th century built on this dichotomy. Where Schumpeter and many others before him had argued for a rather clear-cut delineation between state and market, theorists like Pigou and Keynes argued in the 1930s for a more active government policy. A number of shortcomings were identified in the spontaneous markets, which called for rectifying actions by the state–be it in the form of regulation, subsidies or larger spending schemes.

A more recent development of these theories was presented by Samuelson in the 1950s. His 1954 article on the pure theory of public expenditure was based on a split in the economy between goods provided according to market-like orderings and goods provided by the public sector. The existence of goods and services, such as transport infrastructure, that will likely be provided by the public sector is generally explained by efficiencies of scale and scope in these systems (implying diminishing marginal costs and positive network effects), the existence of (negative) external effects which are difficult to price, and the general deficiencies of payment systems that have hampered the introduction of fee-funded roads and railroads and made it difficult to exclude users (also discussed as free riders).

For air traffic and maritime services (including light houses), on the other hand, fee-based services have been the dominating model in Sweden. An oft-mentioned example in the popular debate about natural monopolies is the notion that lighthouses should be difficult to provide with fee-based financing. This has, however, been countered by the practice in Sweden of fee-based financing, as pointed out by Coase (1974) in his article on the fee-financed lighthouse system in 19th-century Britain.

Other reasons for the government to take on a more active role in the transport infrastructure sector have been a political interest in influencing regional development, distributional effects in general, and the government’s interest to have some control over land use in connection to transport infrastructure construction. In addition, it cannot be kept aside that government has had an interest in controlling the territory (physically) via the transport systems as a necessary means of the core functions of the government (police, defense, tax
collection, education) to be carried out.

To analyze the development over time and to understand the shifts between private sector (market) provision and government involvement, the co-evolutionary perspective presented in the next section is applied. The model is focused on capturing a dynamic development such as the successive steps in the transport infrastructure system over time, more than understanding static equilibrium.

2.1 A co-evolutionary perspective

Literature on co-evolution

A number of theories have been put forward to capture the evolution of societal systems where technology, economics and institutions like political systems interact to shape the development. The basic concept originally goes back to ecology in the 1960s, according to Berg and Stagl (2003). The central point here being that co-evolution (in biological terms) deals with the interaction between different kinds of systems/institutions.

In a study of institution building in early automobile and biotech industries in the US, Rao and Sing (2001) describe three different perspectives for the fostering and development of organizations. One of them, a cultural-frame institutional perspective, comes rather close to a co-evolutionary perspective, where technologies interact with institutions in the process leading to the formation of organizations. Actors with sufficient resources act where they see an opportunity to realize interests that they value highly. The construction of new paths in the development of different sectors is seen as a politico-institutional process.

With regard to the construction of transition paths between different technological regimes Kemp, Rip and Scot (2001) describe three basic strategies in their study of the construction of new development paths in the wind power industry. Firstly, the structure of incentives can be altered to let market forces play. Secondly, to manage the introduction of new technologies and systems through active planning, for example planning for infrastructure could be another regime. Thirdly, the strategy to build on the ongoing dynamics of socio-technical changes and to try to influence change in the desired direction. The authors’ view is that all of these strategies have deficiencies with regard to the precision of outcomes and the time lags connected to them. Therefore, they propose a fourth more specific strategy called the strategic niche management, which is directed more directly on technological regime shifts rather than on affecting incentive structures and institutions.

Kaijser (2004) points at interesting aspects of the development of infrasystems, framing them as socio-technical, where “the institutional frameworks and the system culture are as important as the technical components”. This also reflects a co-evolutionary stance with regard to development over time. Kaijser also highlights the interdependency of infra-systems both in the form of complementarities and competition between systems.

A thorough analysis of the development of the Swedish railroad system has been provided by Andersson-Skogh (1993, 1996), also from an institutional perspective. Ottosson (1997) focuses on the nationalization process for railroads during the 1930s, and the balance between private- and locally-owned railroads and the national interests decisive for the eventual outcome of the process. Furthermore, in Ottosson’s description and analysis an historical and institutional perspective is applied. Millward (2005, 2011) has presented broad perspectives on the development of public enterprise and private enterprise traditions in European infrastructure systems, also applying an institutional perspective, where factors like technology, politics and economics are influential.
In North’s (1990) model for institutional change, “organizations and their entrepreneurs engage in purposive activity” to shape institutional change. North thereby focuses on the entrepreneur as an important agent in the development and change processes over time. Institutions, as the economic and political system, set frames for the functioning of organizations and change of institutions. Important factors in this respect, according to North, are the incentive systems and the transaction costs that are connected to different relationships in organizations. Relative prices (and changes of relative prices) on markets are seen as driving forces for change. Change is seen to be continuous and incremental rather than revolutionary.

Tunzelman (2003) connects technological change (or creation) with the evolution of governance forms in organizations. This is described as a co-evolutionary relationship that is facilitated by matching mechanisms between technology and governance in the form of institutions, power relations, incentives, and knowledge bases. Tunzelman argues that his model can be used to bring a deeper understanding of how “market failures” or “government failures” are related to the interdependencies of governance systems and technology.

North (1990) discusses transaction costs in different settings as an important factor to understand and explain institutional change. Transaction cost theories, as developed by Williamson (1981, 1999), are a tool to underpin an analysis of how sectors, such as transport infrastructure, can be expected to be organized. Depending on the frequency of transactions, the uncertainty of the transactions and the degree of standardization of the assets that are transacted, it is possible to discuss whether different functions could be expected to be organized in markets or in hierarchies. The model has been criticized from a number of angles, for example by Leflavie (1996) to be too static, and do not take learning, agency or power structures into account.

Here, Langlois (1992) offers a line of thinking that aims at adapting transaction cost theories with dynamism and evolution. Langlois argues that transaction cost economics has generally taken a short-run perspective on transitions, which differs from classical economists like Adam Smith, who are interested in long-run perspectives. In the long run all costs are variable, while in the short run many costs and circumstances are fixed. The boundaries of an economic agent, often a firm, are also normally fixed in the short run, while transactions with the surrounding economy and the contracts, which are possible to negotiate at all times, are important.

Langlois is interested in the process by which short-run transaction costs turn into long-run variable costs and the factors that explain this process. Langlois focuses on learning, “as learning takes place within a stable environment, transaction costs diminish”. This learning occurs through the repeated transactions and through the evolution of norms of reciprocity and cooperation. The way the short- and long-run are connected is through the capabilities of the firm, which in turn is made up by skills, organization and technology. Here Langlois quotes Nelson and Winter (1982). On the one hand firms are seen as pools of resources, and on the other the importance of routines is the focus.

In the long run, as transaction costs diminish, Langlois also argues that governance costs diminish when relationships become more and more routine-based. This would speak in favor of market solutions in the long term, since capabilities of the firm should be expected to diffuse in the market. However, hierarchies might be the best choice at some stage in the development. Perhaps this is what happens as technologies successively turn into general knowledge more than specific knowledge of an organization, as time (and transactions) passes. According to Langlois, this diffusion of capabilities in the surroundings of the firm, in other firms or in the market is what shapes the dynamics of transactions.
The ongoing redefinition of internal and external capabilities is, according to Langlois, what explains many of the organizational solutions to processes, in other words whether markets or hierarchies are chosen. If the cost of transferring the necessary skills to another organization on the market is too high then vertical integration might follow. If, however, skills have been transferred to many other firms then markets might be the solution that reduces costs the most. This is also quite close to a co-evolutionary view on governance and technology. The choice between markets and hierarchies is made in a dynamic process where institutions like hierarchies, markets, skills, and production technologies interact.

Conclusions

The focus of this paper is to build a deeper understanding of the driving forces in the development of transport infrastructure systems and an important phase in the development of the government’s active role in the transport infrastructure sector. From this perspective the reviewed literature provides interesting insights.

To start with, all of the reviewed scholars try to capture important features of organizational change and setting in relation to technological change and the surrounding economy. Common lines of thinking are that:

- there is a constant (and mostly incremental) development going on in society;
- different factors or institutions interdependently affect the development;
- cost structures and relative prices play an important part in the outcome of the processes; and
- incentives are an important factor to understand.

Differences are obvious in some aspects. These relate to the:

- role and importance of entrepreneurs as agents–either they are seen as the main agents or evolution is seen more as a random walk, without obvious intentionality;
- emphasis placed on transaction costs for the organization of sectors or markets; and
- importance placed on organizational learning.

Transaction cost theory seems to give tools for understanding the connection between the role of societal factors and the choice of organization of the transport infrastructure sector. With the extension of Williamson’s theories into Langlois’ long-term transaction costs, the theories become more dynamic.

Even if there are differences in the literature on the view of the importance of different factors, it seems reasonable that the development of transport infrastructure systems in Sweden can be seen as a co-evolutionary process, where technology, economics and politics have influenced the outcome with varying strength at various times. The co-evolutionary inspired perspective is described in Figure 1 below. The figure describes the different factors, an evolution process, and the shift over time between private sector provision and public sector involvement.
It can of course be discussed whether transport infrastructure systems have been developed in a linear successive process, as suggested by the figure above. A stepwise approach, with equilibriums that are punctuated and a subsequent move to a new more stable phase, seems to be a more accurate description of the development. The introduction of new technology of railroad and cars represents two such steps. North (1990) describes institutional change processes in a similar way as “overwhelmingly incremental”, even if discontinuous change such as in evolutionary theory is also one of North’s models of change. The straight arrow in the figure representing the historical development might represent a continuous drive of evolution of the transport infrastructure system over time, and is therefore used for illustrative purposes here.

Technology, economics and politics are three important factors influencing the development but are not necessarily distinct, as depicted in the illustration. It is probably more accurate to see these factors as blurred and interdependent rather than separate and distinct.

Over time there has been interplay between the private sector actors, for example construction companies and technology providers such as Ericson and Asea (Swedish forerunner of ABB), and government agencies. This is represented by the interconnecting arrows between private and public sector alternatives in Figure 1. Kajser (1994) discusses this phenomenon as a sign of a “Swedish model” for the provision of infrastructure systems at large in Sweden. This includes the government setting up an agency responsible for the national infrastructure assets, while the responsibility for regional and local networks are given to local governments and private sector actors. An informal cooperation between the actors and the lack of government supervisory agencies in the different subsectors is another part of this view on infrastructure development.
PART 1 - THE GOVERNMENT TAKES CONTROL OVER TRANSPORT INFRASTRUCTURE

3 Background

In this section, the discussion around the nationalization of the road and railroad systems in the 1930s and 1940s as reflected in government committee reports, the government’s proposals (bills) to Parliament, and Parliament’s decisions are presented.

As a forerunner to the committees in the 1930-40s, it is interesting to read the government report on the Road and Railroad-traffic Conference in Stockholm held in May 1927. The importance of the question of how to accommodate the strong growth of road transport during the 1920s was illustrated by the fact that both the Prime Minister (Mr. Carl-Gustaf Ekman) and the Minister for Communication participated in the meeting in which many senior representatives of government agencies and other public sector representatives, interest groups, and scholars in the transport sector participated.

Here, many of the questions that were discussed during the 1930-40s with regard to rail and roads were raised and thoroughly discussed. The strong growth of road traffic, the need for new funding sources and the resulting difficulties for railroads as competition between rail and road grew more intense were all discussed. The discussion in the meeting was later reflected in the two committees on rail and road, where also the specific proposals for nationalization were presented.

The basic analysis of railroads was provided by the 1936 Railroad Committee (SOU 1938:28), which reported in 1938. The Swedish Parliament (the Riksdag) decided in 1939 on the nationalization of most of the remaining private and local railroads.

The questions in relation to road nationalization were analyzed by another government committee reporting in 1941 (SOU 1941:12) with a proposal for the nationalization of the public rural roads. The strategic decision was taken by Parliament in 1942. The following year a more detailed decision was taken and the nationalization was finally effectuated in 1944.

3.1 Railroads

3.1.1 Committee proposal

The main focus of and contents of the terms of reference for the 1936 Railroad Committee was to analyze two main alternatives for the future development of the railroad system:

- Nationalization of the remaining privately-owned railroad systems open to the public; and
- Other measures within the system to reduce costs and improve the overall efficiency.

The report sets out with an overview of Swedish railroad history and policy since the 1840s. It is pointed out that the government financed and constructed the major railway lines but that, partly due to lacking financial resources, major parts of the system were built by private- and local government-owned corporations. Thus, rail lines, which today are seen as a natural part of the national rail network, were constructed and for a long time operated by private corporations.
The government had given extensive financial support, mainly in the form of loans, to private railroad corporations since the first decisions about these measures in the Parliament in 1847/48, a system of support that had lasted up to the 1920s. Concessions were also given to railroad companies to avoid competition from other railroads in the same geographical area and to provide some stability in the projected revenues for the companies. At the same time, the general view was that too many concessions might have been granted, making the long-term financial sustainability of the railroad system weak.

Since the 1880s, a number of private railroads had been bought by the government, for example important rail lines such the line to the mining area in Northern Sweden from the major coast city of the region (Luleå), the west coast line (Göteborg-Helsingborg), the east coast line (Uppsala-Gävle), and several lines in the southern part of Sweden (Skåne).

Deficiencies connected to the railroad system in the 1930s were described by the Committee to consist in:

- high maintenance and operating costs;
- too many and complicated fee systems for the customers;
- too many employees in the railroad companies; and
- a fragmented railroad system with too little use of positive network-effects.

Arguments against nationalization were described as:

- Reduced market pressure and competition would result in reduced efficiency;
- Introduction of technology could become slower than earlier due to reduced competition in the sector;
- A consolidated railroad organization would be too large of an organization to achieve efficiency; and
- Pressure from the local public with regard to the extension and continuation of non-profitable services would be more difficult to counter in an organization where the government would decide and the Parliament would have stronger influence.

The Committee concluded, after calculating very precisely the costs of the system of the time and the prospective reductions in costs and revenue gains from a consolidation, that the cost reduction due to rationalization and a simpler fee system that could be introduced countered the arguments against nationalization. The Committee also concluded that other alternatives to restructure the sector, within the existing structure, would give less positive results compared to nationalization.

There were few arguments based on welfare economics-based considerations, even if the theory was well developed at the time of the decisions, and none (openly) on the need for nationalization as a precaution and preparation for the coming world crisis and possible war in Sweden’s close surroundings.

3.1.2 The government’s proposal to Parliament

In its proposal to Parliament in March 1939 (1939:237), the government presented the comments that had been sent to the Ministry of Communication in response to the official review of the 1936 Railroad Committee’s report and presented its final proposals for nationalization.

However, as a starting point, the Minister made some general comments about the railroad system. The fact that around 70 percent (11 540 out of 16 840 km) of the railroad
system had been built by private and local corporations was thought of as a sign of the great importance private corporations had in the development of the overall rail system. The remaining 30 percent (5 291 km) was built by the government. The government had given 336 concessions to private railroad corporations, out of which 272 remained in effect, divided on 94 active railroad companies, as of 1939.

In the comments sent to the Ministry with regard to the Committee’s proposals, there were concerns from the industry, voiced mainly by the regional Chambers of Commerce (Handelskamrar) in different parts of the country. In general, the Chambers of Commerce rejected the proposal to nationalize the private sector railroad corporations. This view was based on the idea that competition between the private and the government sector-managed railroad systems should be seen as something positive for business life in general. It was also questioned whether a large organization like the new Railroad Administration could be managed efficiently. One Chamber of Commerce stated that large scale per se could not be seen as a guarantee for efficiency.

Another strong support for preserved competition came from the Swedish Cooperative Union (Kooperativa Förbundet), which stated that private and local railroads were essential to avoid monopoly of long distance travel and transport, and that competition was crucial for the development of the transport system. A state monopoly was rejected since it does not secure “the best or cheapest transport organization to be utilized”.

In parallel with this line of reasoning were concerns raised by other respondents (including some County Administrative Boards, the regional representatives of the government, Länsstyrelser) that the size of the new organization was a problem.

Another problem that was raised about the report, and which was also reflected in the report as discussed earlier, was that a larger organization like the new National Railroad Administration would find it difficult to counter local pressure groups calling for extended or prolonged rail services. In contrast, the minor and local organizations were claimed to be stronger in countering these claims, since they knew the specificities of the local situation better, and because users and customers knew that extended services, generally leading to higher costs, must be borne by the local collective, thereby making cost-driving claims less probable. In a national organization, however, this close link between users and operator would be lost, which might lead to a risk for cost-driving decisions and pressure.

Whether competition is necessary to foster technological development was also discussed in the comments. As an argument against nationalization, the Swedish Railroad Association (Svenska Järnvägsförbundet) mentioned that competition was valuable for technological change. The Rail Administrative Board (Järnvägsstyrelsen), on the other hand, rejected this idea and the claims that the local companies were more efficient. According to the Board, the diversified structure of the railways was reminiscent of a 19th-century perspective on industrial structure and economic life. National perspectives were necessary in order to reach efficiency. In addition, welfare economics analysis was necessary to make a correct assessment of the rail system’s value to society, according to the Board.

The Swedish Railroad Association brought another question to the forefront, which had not been discussed at length by the Committee: the private railroad companies had developed a substantial network of bus and truck transport to support the rail transport system in their separate areas of operation. Thus, the private corporations had 1 274 buses and trucks, while the Railroad Administration had only 318. The Railroad Association pointed out that the nationalization also meant that bus and freight transport was to be nationalized to a large extent, not only railroads.

In the bill (1939:237) the Minister for Transportation gave his conclusions on the basis of the Committee’s report and the comments as presented in the bill. He concluded
that there were stronger reasons for a continued strengthening of the government’s role for the railroad system than for refraining from new measures. Further, the Minister saw railroads as an indispensable part of the transport system, which had a central role for the industry and economic life at large. These arguments also seem to have been the basis for the generally positive view on railroads in the bill and for the government’s proposed wider involvement. The Minister also countered one of the major arguments against further government intervention, explaining that competition should be reduced in the railroad sector by nationalization, with the view that competition must be between different modes of transport and not between different small railroad operators. A number of more specific arguments were, however, also raised in favor of government action.

The arguments were:

- The weak economic situation in many of the private railroad companies as a result of the downturn in the economy in the 1920s;
- The growing competition from road traffic;
- The need to reduce operating costs in the rail-sector;
- The need to meet the complaints with regard to slow coordination between the private rail companies regarding fee structures and technological development; and
- The interest from a military standpoint to have a unified railway system.

Two questions were discussed at length in the bill: the strategy for, or speed of, the takeover by the government, and the costs of the takeover.

Since the railroad companies had been given concessions to operate railroad traffic, the government could not just decide to expropriate the assets of the companies without serious legal concerns. Since this had been a major question at earlier stages in the discussion about nationalization of railroads, a separate legal investigation was presented in the bill on this issue. It was concluded that nationalization should not be seen as infeasible due to these legal circumstances.

With regard to the cost of and process of the nationalization, the Minister presented experiences from the rather large number of earlier government takeovers of private railroad companies that had taken place up to the late 1930s. These had been executed after negotiations in each single case, where the value of the assets and the profitability of the company had been discussed at length. The conclusion was that the government was in favor of a successive but rather fast process, wherein Parliament primarily authorized the government to acquire railroad companies that were bankrupt and sold on (insolvency) auction.

The total funding needed for the takeover of the railroads that were expected to be acquired by the government was projected at SEK 330 million, a substantial amount at the time. Although the government foresaw major depreciation needs in the acquired assets, the National Debt Office (Riksgäldskontoret) reported to the government that it viewed the funding to be reasonably easy to raise and not too expensive, partly due to the low interest rates at the time. Compared to the total government debt at the time of approx. SEK 5 billion (Statistics Sweden, 1960), SEK 330 million was, however, a rather considerable amount.

The conclusion, as it was presented in the bill, that a government intervention was appropriate was rather strong, and the government was prepared to take on considerable costs in order to effectuate the decision. At the same time, the policy was rather soft in that no compulsory nationalization was suggested. The takeover should instead be managed through successive negotiations in single cases, as the private railroads initiated negotiations or became insolvent, and the government could acquire either the assets from the insolvent or bankrupt company or the shares of the companies.
3.1.3 Parliament’s decision

The government’s bill (1939:237) was handled by the Parliament’s Standing State Committee (Statsutskottet) in its Statement No 172 of 1939. A number of proposals put forward by single Members of Parliament (MoP) were referred to in the statement. The opponents suggested that a plan for the coming nationalization should be developed and put forward to Parliament, and that the coming nationalization should not in any way reduce the concessionary rights given by government or include any but absolutely vital and necessary railroads. Proposals were also put forward that separate government agencies should be established that could either have the role of negotiating agreements with railroad companies or have the role as overseer of the negotiations.

The Committee in particular pointed out some of the issues raised in the bill. Firstly, it was concluded that the projected cost for the nationalization, SEK 330 million, could be divided in two parts: SEK 150 million for the shares in the companies and SEK 180 million, corresponding to the takeover of the debt of the companies. This reduced the direct funding burden and thus the lending need of the government, according to the Committee.

Secondly, the Committee pointed out that the Minister had proposed that a close consideration should be given to any single proposal to take over a railroad, and that the acquisition of any shares in companies should be put forward to Parliament for its separate decision. Only if it was a matter of acquiring the shares of a bankrupt/insolvent company should the government have the authority to take the necessary measures without hearing Parliament, and only if there was “motivation from a general communication policy standpoint”.

The Committee went on to present its deliberations in relation to the proposals in general.

To begin with the Committee stated that the process leading up to the proposal for nationalization had been initiated by the proposals put forward in Parliament in 1933 by single MoP, and that the nationalization of railroads in Sweden should be seen as part of an international trend, where railroads in many countries had been coordinated or nationalized in the 1920-30s. The cautious by some MoP and some of the organizations that had given formal comments to the government, that the concessionary rights of single railroad companies could be diminished or breached had, according to the Committee, been analyzed by legal experts and proven not to be a real obstacle for nationalization to begin.

The Committee at large was thus in favor of the proposals put forward in the bill, but emphasized more clearly that the assets of the companies should be acquired rather than the shares, and that the outreach of the nationalization should be rather broad. Furthermore, local railroads should be included in the takeover and not just major lines. The Committee also raised the positive effect the nationalization should have on defense planning and preparations for crisis situations and conflicts. This is the most obvious sign of the coming war influencing the decision process. Finally, the proposal to establish a neutral board for the evaluation of takeover proposals was supported.

A reservation of the Committee majority was included in the statement, which argued for a more cautious strategy with fewer takeover measures, with renewed concerns of the risk that a monopoly situation in bus traffic might become the end result of the process.

In its formal Statement to the government (1939:318), Parliament reported to the government on its decision. The more activist opinion of Parliament, as compared to the government bill, is reflected in the Communication with some rather lengthy comments, which is not the usual format in these documents. Parliament expressed its view that the
nationalization should be implemented faster than the Minister had suggested. Therefore, expropriations should be considered more actively than the government had suggested, and the National Debt Office was directly commissioned to supply the necessary funding.

One reason that was raised was that there was interest from a defense perspective to nationalize the railroads, which was given a more prominent role in this Statement, compared to both the Standing Committee’s statement and the government’s bill.

3.2 Roads

3.2.1 Committee proposal

The Road Committee was given the following terms of reference by the government with regard to public rural roads:

- Analyze how an equalization of costs and thus of charged taxes in different parts of the country could be achieved.
- Take into consideration how common quality standards for construction and maintenance of roads could be set and implemented.
- Take into consideration how administration and government supervision could be made more efficient.
- Explore possibilities to improve efficiency.
- The situation in the cities, with local responsibility should not be altered.

The work should be carried out within the framework of a possible future nationalization of rural roads, at the time managed by 170 local road districts.

The Committee initially described the historical growth of the road system in Sweden as a beginning and background to its work. There had, according to the Committee, been a discussion about nationalization mainly concerning rural roads since the early 1890s. A number of government committees had analyzed the questions. Roads in cities, administered by the cities, and exclusively private and local roads, managed by local road communities (samtälligheter) or private corporations, had not been included in these earlier discussions. Also, this time only rural roads were the focus of the analysis.

The growing proportion of long-distance transport had made a new consideration of the division of responsibilities necessary. Another reason for going through the questions again was the high proportion of government funding that had evolved since the 1920s (by the late 1930s to 75-95 percent of local road districts’ costs). According to the Committee, this new financing situation made the local responsibility less important and less relevant than earlier.

The Committee made a thorough analysis of the arguments in favor of and against nationalization. The questions connected to organization of and possible nationalization of rural roads had been discussed in a number of government reports since the beginning of the 1900s. Therefore, most of the arguments were well known. Arguments in favor of nationalization according to the Committee were:

- In a national organization the government could decide on its own resources, whereas with the system based on the 170 local road districts government resources were handed over to the districts as grants without close government control.
- Differences in costs (and tax levels) could be equalized between different parts of the country.
The local organization was lacking in competence, and major differences in competence levels were at hand in different parts of Sweden.
- The administrative and operating costs could be reduced in a national organization.
- Procurement could be made more efficient in a larger organization.
- The Committee also concluded that there was major interest in times of crisis and war that government control over the major roads in the road network was strengthened.

Arguments against nationalization that the Committee put forward were:

- The local influence could be reduced by the nationalization.
- There were concerns that the overall costs would rise in a larger national organization.
- Concerns were also voiced that there should be difficulties in opposing local interest groups in a national organization, decoupled from the local settings and with political influence on a national level.
- Views and concerns were also expressed that procurement and maintenance costs in government organizations were often seen to be more expensive than local governments’ costs in the same areas.
- An argument that had been reiterated in many of the reports with regard to the road organization was that a nationalized road system would represent too much spending for the government’s budget.
- Nationalization would give further centralization to Stockholm, which was seen as negative.

As in the Railroad Committee’s report, detailed calculations of the projected cost reductions were made, showing some limited cost reductions following a nationalization decision, and mainly in administrative functions.

It is clear from the reasoning of the Committee that war time considerations played a more important role in the analysis, much more so than for the analysis of the railroad sector a few years earlier.

3.2.2 The government’s proposal to Parliament

The government’s bill sent to Parliament in 1942 starts with a historical overview of the discussion and analysis of the organization of rural public roads. The Minister of Communication reflects on the fact that since the 1880s there had been a discussion around whether the responsibility for rural roads should be shifted from the local (primarily landowners organized in road districts) level to the government level.

At a number of times (1880, 1916, 1920, 1929) the questions of a possible nationalization had been raised in government committees, but it had so far always been found that there were strong arguments in favor of preserving the local responsibility for rural roads.

The basic argument for preserved local responsibility was that roads were seen as a purely local issue to handle, and that the local responsibility was seen as the sound principle, since those who used the roads the most, the local farmers and landowners, also had a duty to finance road maintenance and building, either by unpaid work or by paying local road tax.

At the same time, the government had paid grants to local road authorities since the 1840s for construction and since 1895 for maintenance. There was clearly an ongoing expansion of the government’s role in the road sector since the mid-19th century.
The growing use of monetary financing of road management and the diminishing role of unpaid work was a stepwise but continuous process. In 1891, local road taxes were introduced, while unpaid work still remained as a means of maintaining and constructing roads. This development was finalized in the 1934 Road Act. In this act the financing of rural roads had finally been changed to be based only on monetary contributions.

Only four years after the implementation of the 1934 Road Act, in which, besides the change of the financing system, the roles of the National Road Administration and the local road districts were changed, with stronger coordination and national influence, the government decided to analyze the organization and financing of the road system again. The background was the large variation in road taxes charged by the road districts in different parts of the country. Local charges for road tax varied from 0.3 to 4.84 percent income tax. According to the government committee investigating a new system for local Income tax (Kommunalkatteberedningen) working in parallel to the Road Committee, this was one of the most pressing dilemmas in the local tax system of the 1930s.

Another reason for the decision to re-open the question, reflected by the Committee, was that road traffic had continued to grow drastically in the 1930s. The number of cars had risen from 8,500 in 1919 to 248,800 in 1939, with a drastic increase in the late 1930s. In 1938 the increase was reported to have been 250 percent. The government’s costs for grants for the road districts were also growing fast. The yearly appropriation had grown from SEK 38 to 82 million in the 10 years from 1928 to 1938. The strong growth of both road traffic and costs in the government’s budget called for some kind of government response.

Analyzing the comments to the Committee proposals from the official review it can be noted that there was support for the proposals of nationalization of the rural roads from government agencies and organizations on the national level, such as the government’s Administrative Board (Statskontoret), the National Road Administration (Väg- och Vattenbyggnadstyrelsen), the Headquarter of Defense (Försvarsstaben), the Swedish Association of Graduate Engineers (Teknologföreningen), and motorists’ organizations (Kungliga Automobilklubben och Motormännen). A majority of the cities were for nationalization (68 of 116), even if 43 did not express a view.

On the opposing side were most of the county administrative boards (19 out of 24), the Association of Road Districts and Rural Local governments, and the majority of the road districts.

The comments in favor of nationalization focused on the need to rationalize the operations of local road administrations, both in terms of costs and methods and technologies in use. From a military point of view, the Headquarter of Defense pointed to the positive aspects if the road network was more coordinated and put under central management.

The negative comments detailed the loss of local democratic influence and the short time elapsed since the reform in 1934 as the basis of its view on the reform proposal. It should, according to these comments, have been welcomed if the Committee had been given more open terms of reference from the government to analyze the questions rather than only analyze how nationalization could be effectuated. These views were expressed by many of the county administrative boards.

The Minister concluded that, on balance, most of the arguments were in favor of a nationalization of rural roads. Road administration could, according to the Minister, be seen as something that should be managed by the government with a national focus, rather than a local responsibility. The growing traffic volumes and the great variety in local road taxes were strong reasons for action. A number of additional reasons were given, such as economic rationalization, improved and equal technical standard, military and defense reasons, and that road building and maintenance could be used as a tool in fiscal and economic policy
to counter recessions in the economy. The latter argument was echoing an activism rather similar to Keynesianism.

The concerns over a loss of local democratic influence voiced by many in the debate should, according to the Minister, be countered by the proposal to set up road boards (Vägstyrelser) on regional and local levels, where representatives would be invited to participate. These boards should have the function to support the county administrative boards and the regional districts of the (new) National Road Administration in its respective decision-making.

The Committee had proposed that all public rural roads should be included in the nationalization. In one comment to the Committee report the proposal had been put forward that the nationalization should include only the main roads, with a high proportion of national transport flows, and that the remaining roads should still be administered locally. This proposal was countered by the Minister with reference to economic rationality. Calculations made showed, according to the Minister, that total costs would be higher with such a solution. The basis for this statement was, however, rather briefly presented.

Finally, the proposal to Parliament was to obtain its consent to the principles of nationalization of public rural roads as proposed in the bill – even as the Minister mentioned the war time situation could speak in favor of resisting changes – and that the nationalization through the takeover of the assets and debts of the local road districts should be implemented as of January 1944.

3.2.3 Parliament’s decision

The bill was handled by the Parliament’s Second Special Committee (Andra särskilda utskottet), which was reported in Statement No 2 of 1942.

A number of MoP proposals raised in Parliament were commented on. These MoPs suggested, in short, four different changes in relation to the government’s proposal:

- Reject the proposal in order to have time for a new proposal to be put forward with a focus on nationalization only of main roads.
- Make the nationalization voluntary for the regions (län) and to include cities.
- Take into account the needs of the forest industry of well-functioning freight transport.
- Rural interests influencing the future National Road Administration should be safeguarded through stronger than proposed measures.

The Second Special Committee made only few additional comments in relation to what was presented by the government in the proposal.

The main arguments in favor of nationalization were repeated, with an emphasis on economic rationality and the need for implementing equal technical standards in all parts of the country. The Committee also clearly mentioned the need for strengthening national coordination, as expressed by, the Headquarter of Defense in its comments.

At the same time, the Committee rejected the view that local influence should be difficult to safeguard in the new organization, and that a central organization like the National Road Administration should be weaker compared to the local authorities in rejecting local interests pushing for local road projects, a view that had also been put forward for the nationalization of railroads.

The proposal by one MoP to include only major roads in the nationalization was rejected with the argument that it would be difficult to choose which of the roads should
be included in the national network and which roads should be left in the rural network.

The proposal was that Parliament should endorse the general principles for nationalization of the rural public roads as suggested by the government, and that the proposals from a number of MoPs should be seen either as responded to by the comments given in the Statement or to be left without any action.

A reservation against the Committee majority is included in the Statement, arguing for the reform of 1934 to remain in effect for a longer period before any change is made, and expressing concerns over the loss of local influence, raised costs due to centralization, and an overly extensive outreach in the nationalization, as concerns the length of roads taken over by the state. The proposal was to conduct a new analysis before any decision is made.

Parliament decided in accordance with the Committee proposal. The decision was reported to the government in a Statement (1942:325). Following this decision a special committee was set-up by the government to plan for the implementation of the proposals. In a 1943 bill, the government reported back to Parliament on the more specific issues in relation to the nationalization. The nationalization was completed in 1944.

4 Reflections on the nationalization

4.1 Which were the driving forces and arguments for and against nationalization?

Two different systems and nationalization processes, with similarities

According to the official documents in relation to the nationalization of railroads and roads it is obvious that there were both differences and similarities between the decision processes. The differences are that the two systems originated from different historical backgrounds. The railroad system had been introduced as a new technology in a rather short time period from 1850 to 1900, shaping new relationships and transport networks, and introducing a comprehensive centralized organizational model for construction and maintenance, as well as for operations. The introduction of railroads can, in parallel with a chronology presented by Tunzelman (2003), be seen as an example of the “second era” of organizational models in economic evolution, where larger corporations and organizations dominated the economy, whereas in earlier “eras” small and medium-sized companies were more dominant.

The nationalization of rail can be seen as an example of a classical restructuring of an industry sector having met economic difficulties due to high costs and a too-fragmented structure, where there are a number of later examples in Sweden and in most other countries. Even if private and local companies had built a considerable part of the network, the railroad system was more of a top-down structure than roads.

There had been a number of earlier initiatives from the government to intervene in the railroad business. Grants, concessions and loans to private railroad companies had been part of the government’s policy towards the rail industry in Sweden since the 1850s, and a number of railroads had been taken over by the government over the years in an ongoing centralization trend. Compared to other countries on the European continent, the Swedish model, as Ottosson (1997) suggests, represented something like a mid point between a market-based and a centralized railroad model. For a long period the government was rather reluctant to get involved more than necessary in the railroad business.

Roads, on the other hand, had been part of the transportation system for some time. Roads had been built and managed by landowners and local businesses since the medieval time to enable transport in the local environment, and to allow for some transport flows in wider geographical areas. Organized as an activity that local interests were responsible
for, and mainly based on already present older roads, the drive in the development was less coordinated than for rail, as such roads show many signs of a bottom-up system, which is rather different from railroads.

The government had taken coordinating measures, especially from the 1840s onwards, with the establishment of the Royal Road and Waterways Administrative Board (Kongliga styrelsen för allmänna väg- och wattenbyggnader) in 1841. However, it was only during the 1920s that there was considerable challenge to the local administration. Similar to railroads, technology seems to have been a strong driving force in the change process. The number of cars, buses and trucks grew fast, and transport changed from mainly local flows to higher proportions of regional and national flows. By the mid-1930s, financing was dominated by the government and national coordinative measures had grown in importance over the first decades of the 20th century.

As with railroads the government was, however, reluctant to get more involved in the (rural) road sector. Even if there were, according to a number of government committees analyzing these issues from the late 1800s to the 1930s, strong reasons from an economic, organizational and technological point of view to take coordinative measures which the government refrained at length.

Based on the widespread criticism towards centralization in the comments to the Committee report, as previously discussed, it seems reasonable to conclude that the reluctance to get more involved had partly to do with the difficulties in changing the basic distribution of power between the central and the regional and local levels in the public sector. Until the nationalization decision was taken there were opponents to any change in the power distribution. Local governments in Sweden have traditionally had a strong position in their different areas of responsibility, and the view (also based in the Constitution) that local responsibility should be preserved (if possible) has been widely accepted. In Sweden, it has generally been easier to give new duties to local and regional levels than to reduce their competence, even if there have been strong arguments for centralization in various sectors.

Despite the fact that nationalization of rail and road was decided only between a few years and was based on similar arguments of business economics-inspired rationalization, it could, taking into consideration the backgrounds of the systems, be argued that the decisions had rather different explanations. With nationalization the railroad industry in Sweden was taken a further step down the lane of scale-economies, which had already been part of the business structure in rail from the outset, however, until nationalization within a fragmented structure.

One the one hand, rail could be seen as part of an ongoing restructuring of different business sectors in the economy and a restructuring of an integrated transport and infrastructure business. On the other hand, roads could be seen as an example of the urgent need for the government to meet a new challenge in a sector that changed from a local to a more regional or national logic in only a few decades. The final reason for the decision made for roads seems to have been the need to answer the needs of economic rationality and geographical equalization of costs in different parts of the countries, more so than a clear political wish for centralizing authority and power. Finally, most clearly when it comes to roads, the perceived needs in times of world crisis and war gradually came to influence the decisions, other than for economic reasons.

Perhaps there was also interrelation between the two decisions; when the resistance to nationalization of railroads was overcome in 1939 it might have been easier to also go ahead with road nationalization in 1942. The detailed study of the publicly stated reasons for nationalization shows similarities between these arguments more so than the historical development and background of the two systems.
The specific reasons for and against nationalization

Based on the presentation in section three, it is obvious that the discussions about both rail and roads were focused primarily on what was perceived as the most urgent problems and difficulties in the sectors at the time rather than on more theoretic or programmatic views on government ownership of transport infrastructure assets. It could be argued that two main reasons stand at the forefront of the analysis and discussion of the time. Firstly, the (at least projected) diminishing net result of private railroad companies was seen as one dilemma. Secondly, the difficulties (financially, technically and organizationally) for the many local road districts to handle the new situation with growing and less local road transport flows, in combination with tax policy considerations, was the other main reason for the government to take action. The main reasons for and against government action, as they were presented in the studied documents, are summarized in Figure 3.
## Arguments for and Against Nationalization of Railroads and Roads in Government Committees, Bills, and Parliamentary Statements

<table>
<thead>
<tr>
<th>Argument for and Against Nationalization</th>
<th>Rail</th>
<th>Against</th>
<th>Road</th>
<th>Against</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Business Economics, Efficiency and Organization</strong></td>
<td>Larger units can cut costs more efficiently than small units. Positive effect of better use of rolling stock. Positive network effects in general.</td>
<td>Too large of an organization to manage efficiently.</td>
<td>Reduction of local road districts' high costs and equalization of road tax levels. Effective use of machine equipment. More efficient procurement in a large organization. Stronger competence in national organization.</td>
<td>Government operations are often more expensive than local government's operations.</td>
</tr>
<tr>
<td><strong>Welfare Economics</strong></td>
<td>Mentioned by the Rail Administrative Board as support for government intervention.</td>
<td>Not mentioned as any major argument.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Competition Policy</strong></td>
<td>Concerns that reduced competition would slow technical development and raise costs. Concerns over monopoly in bus transport as a side effect of nationalization.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Technological Development</strong></td>
<td>Centralization fosters technological development.</td>
<td>Centralization fosters technological development.</td>
<td>Major debate in the analysis and the comments to the nationalization proposal about worries of loss of local influence. Roads were seen, by defenders of the local road districts, as a genuine and important part of local democracy.</td>
<td></td>
</tr>
<tr>
<td><strong>Local Democracy and Influence</strong></td>
<td>Concerns that local influence would be lost with nationalization, mainly the connection to local business life and local transport customers. Concerns that a national organization would not be able to resist local views and pressure groups.</td>
<td>Government's view that major roads had become a national interest more than a local interest. A nationalization would reduce differences in local income taxes.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Industrial Policy</strong></td>
<td>Important to reduce and simplify fees in the rail network.</td>
<td>Only slightly mentioned. Important to secure the role of the forest industry mentioned in Parliament.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Defense Policy</strong></td>
<td>Mentioned only as a minor argument.</td>
<td>Private railroads provided surplus capacity, which was seen as positive.</td>
<td>Centralization mentioned as an important reason for nationalization.</td>
<td></td>
</tr>
</tbody>
</table>
The influential economic arguments in favor of nationalization were mainly based on business, or production economics, rationality. The organization of the time, with a large number of local units both in rail and road, was seen to lack the necessary overview of transport flows, to be inefficient both in terms of production efficiency, lack of technology and skill, and being too local in its focus. Andersson-Skog (1996) has put the emphasis basically on the economics rationalization as something like an overriding motivation of the nationalization, which also according to her analysis had a basis in a long-standing discussion around the railroad system in Sweden and its functioning.

Another study of the processes leading to the decision to nationalize the private and local railroads (Alvfors, 1977) suggests a similar interpretation, where the possible rationalization in combination with the prospects for the introduction of a unified fee system for freight transport in the nationalized system is given a decisive role in the discussion.

There was a view among many of the organizations commenting on the proposals that the current organization at the time was outdated, or as the Railroad Administrative Board put it, a reminiscence of a 19th-century perspective on industrial structure and economic life. The nationalization would bring not only a more rational structure with lower costs, it would also be a step towards a more modern society with a national rather than local view on transport issues and societal development. Nationalization was thus also perceived as part of a modernization project, which obviously had strong support both in the government and Parliament.

This line of reasoning comes close to what Blomkvist (2001) describes in relation to the growth of the Swedish National Road Association (Svenska Vägföreningen). The development of the road system and the technology stance on road planning and management can be seen as part of a professionalization and modernization project. A government takeover of the road system was, according to Blomkvist, seen by many of the actors involved in the growth of a Swedish road lobby as a guarantee for strengthening of the technological competence and quality of the road system at large. Centralization and government involvement thus had support from a powerful group of actors, who could otherwise perhaps be expected to speak in favor of market solutions and free competition.

In relation to the present (and later) discussion on government involvement in the transport infrastructure sector, there is an obvious difference in the discussion of the 1930s in that there were only few arguments based on welfare economics theory. The documents produced by the government committees and Parliament’s decision process before the final decisions are almost entirely silent on these economic issues. The use of economics theory to analyze systems like rail and road were mentioned by economics Professor Eli Heckscher in the 1927 Rail and Road Conference, and by the Rail Administrative Board in its comments to the suggested nationalization of railroads, which were partly based on a welfare economics perspective on rail issues.

As shown in Mosca’s (2008) article there was, however, already in the 19th century a discussion on the presence of areas of the economy where normal markets were difficult to arrange. The specific difficulties connected to railroads, where scale economies and low marginal costs are at hand, were already discussed in the economic literature by the end of the 19th century. While the academic discussion was rather developed it seems like this knowledge did not come to any publicly mentioned use in the decision process. Blomkvist (2001) reports similar findings in the early 20th-century discussion on road policy and lobbying activities in Sweden. Welfare economics reasons were seen as important but only to have come to a vague use in the Swedish debate on the strengthening of road policy of the

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1 Eli Heckscher developed the Heckscher-Ohlin theorem together with Bertil Ohlin at the Stockholm School of Economics.
time. The founders of the Swedish Road Association, however, used these arguments to some extent, inspired in part by the discussions in other countries.

Arguments that roads and railroads should be seen and treated as natural monopolies, where the most accurate owner is the government and that welfare economics analysis should be the starting point for a discussion of fee structures and financing requirements, were thus only briefly mentioned in the documents. Furthermore, these views have to a large extent been adopted only in the last few decades in Sweden. It is interesting to remember this, since welfare economics today seems to be the overriding ideology of discussions around the efficient management and use of transport infrastructure assets. That transport infrastructure assets can be seen as natural monopolies is also part of the general view on public policy today that few question.

Alfvors (1977), taking a broader perspective that also includes the general public discussion about railroad policy in Sweden at the time, makes the point that there was a more obvious argumentation for a broader application of social economics perspectives on the railroad system. Well-known economists, such as Myrdal, Ohlin and Wicksell, all seem to have argued for a welfare economics-inspired view on the railroad policy area. Perhaps the more cautious view on these issues in the public documents reflects the government’s hesitations to take into account such arguments that would call for action, until necessary. Of course, a welfare economics view would also lead to a considerable amount of extra spending for the government, in a system where the private railroads had to be acquired and could not be nationalized without actual payments.

An issue that had been discussed more than welfare economics in the public debate during the 1920-30s was the ongoing concentration of business life in general. The formation of larger corporate structures and the existence of cartels or monopolies in many sectors had been viewed, both in Sweden and in other countries, as something more or less unavoidable and positive in a developing economy. The process of concentration in the economy, which inherited positive aspects such as cost reduction, also included negative aspects such as the risk of monopoly pricing and of reduced efficiency and slower product and technological development.

Morgan (1992) presents an overview on the view of late 19th century (mainly US) economists on the concept of competition, which not only shows an intensive debate on the concept and its likely outcomes, but rather diverse views on how to understand and describe competition in an era of large business units. In academic discussions, the idea that sectors where scale economies (like railroads) prevail tend to favor a monopolistic market structure rather than perfect competition was discussed by, for example, Sraffa in the mid-1920s, as quoted by Elliot (1983) and Mosca (2008). Thus, discussions on the tendency for centralization and monopolistic structures seem to have been an active theme in academia at the time when the nationalization of railroads and roads was decided in Sweden.

Worries about negative effects that might follow from centralization and nationalization are also present in the documents both from the rail and road aspects. Negative effects were discussed from a consumer and industry perspective. Nationalization, it was argued, would bring centralization—organizations that are too large to be efficient, higher costs, slower technical development, and less user-friendly approaches—rather than a free market or organization with many actors on a local and central level.

An interesting line of reasoning among the critical voices was that a centralized organization would be more open to pressure from local opinions than the local organizations. There concerns seem to reflect arguments that were developed later on in relation to theories around public choice and fiscal federalism with scholars like Buchanan, Tullock, Hayek, and Tiebout as prominent examples. Ultimately, these arguments, however, do not
Examples from other countries were used to some extent in the argument for nationalization but also by the parties against nationalization. Proponents for nationalization argued that similar measures had been implemented in other countries with positive results, as in the UK and the US for railroads. On the contrary, criticism towards road nationalization was partly based on parallels with the development in other European countries, where it was argued that a lesser part of public roads had been nationalized in relation to what had been proposed by the government. The foreign examples were primarily used as examples and to underpin the arguments in general. They were not at the center of the argumentation, which is reflected in the documents.

An interesting issue is of course to what extent the coming, and later full, war affected the decisions. Here, based on the official documents, the railroad decision was only affected to a minor extent, while for the road decision arguments based on wartime considerations were more explicit. Most strikingly, seen 70 years later, is perhaps the limited interest that considerations in relation to defense-related arguments had at the time of the nationalization. It seems likely based on this study that nationalization would have occurred for rail also during time of peacetime. The defense policy-based arguments were among other arguments used to counter the strong local tradition in the road area. Whether nationalization would have been decided on for roads in peacetime seems less certain than for railroads.

The decision process

Government involvement and the process leading to the final decisions on nationalization of railroads and roads developed gradually over a long time. Both issues had been discussed and analyzed by a number of government committees. The government had become more and more involved in the two sectors over time, both financially and actively, owning and managing parts of the system. The final steps were thus drastic in their outreach but at the same time perhaps a logical fulfillment of the pragmatic and reluctant policy of the government. For roads the final step was an example of a more distinct breach of the division of responsibilities between the government and the local level. The government seized more direct control over a sector in society where it had not before been active to this extent.

It is interesting to see that Parliament was in favor of a more activist policy for rail and partly for roads than the government proposed in its bills. Thus, for railroads Parliament argued for a fast, not a successive, takeover of the private railroads. Parliament also strongly argued for the takeover of the assets, not the shares in the local rail companies, which the government primarily argued for. Therefore, Parliament seems to have had a less cautious view compared to the government with regard to a breach of proprietary rights and been less cautious when it comes to the difficulties connected to taking decisions against the many rail concessions given by the government, and still in effect at the time.

For roads counter-arguments towards nationalization were more strongly voiced in a number of MoP proposals than correspondingly for railroads. This could be a sign that questions relating to the division of power between the government and the local level were more at the center of Parliamentary discussions than the more industrial policy-oriented discussion on rail issues. Parliament countered most of the proposals and strongly argued in favor of the nationalization of the rural roads.

A way of understanding the more activist stance in Parliament might be that the government must always carry on with its relationships with all of the conflicting parties after a decision is taken, in the implementation of the decision and in the day-to-day management of railroad and road policy. Parliament, on the other hand, is more separated from direct contact with different interest groups. This could make it easier for Parliament to be more
programmatic than pragmatic. Furthermore, programs and politics are the core responsibilities of parliaments more so than for governments.

Another thing is that moral hazard issues arise as the government decides to nationalize assets held by private and, in this case, local authorities. A negotiation game thus might have been developed between the holders of the local railroad companies' shares, where these were interested in boosting the value of the company. At least two arguments in favor of that view were made: the strong transport market in the late 1930s and the intrinsic value of the concessionary rights, which the government was cautious not to override.

With regard to roads Bill 1943:223 reported on the actual takeover of local road districts, specifically that these had been essentially mismanaged following Parliament's decision to nationalize rural roads in 1942. Debt levels had increased in many of the road districts and maintenance had been cut to minimum levels. This seems to have become a concern for the government, speaking in favor of a fast nationalization process. Parliament, being last in the chain of decision-makers, might have experienced these moral hazard problems even more as time passed, which might explain the eagerness to support a fast and wide-ranging nationalization process.

Similar moral hazard situations have arisen in other situations when the government has been planning to nationalize private assets. A recent example has been the experiences of the government takeover of banks in relation to the financial crisis in the 1990s and 2000s, and the following discussions and decisions on the legislation on government Support to Financial Institutions (2008:814). The main purpose of this legislation is to allow room for government intervention but only if absolutely necessary, while reducing moral hazard situations by clearly stating that the shareholders of the financial institutions are responsible for economic losses. In extreme cases the government is given the right to take over the shares of a financial institution in distress. For the control and scrutiny of the price for such transactions, and other circumstances in the case, a special investigation board is set up according to the law.

The government seems to handle similar situations with equal measures even if the sector has changed and more than 70 years have elapsed since the takeover of private railroads was discussed. Moral hazard dilemmas are present today as they were in the 1930s.
PART 2 – THE GOVERNMENT’S OWNERSHIP ROLE AND TRANSPORT POLICIES ARE FORMED

“A dynamic development is rarely centrally planned. It grows as a product of, among other things, imagination and impulses among a multitude of business-men, who in mutual competition with varying success experiment without being prevented by anything than necessary regulations. Administrative dirigisme, implemented by ever so skilled public officers, will on the contrary inevitably largely build upon the present state. Dirigisme thus, in general, has a preservative effect.”

The 1944 Transport Committee (SOU 1947:85, pp. 52-53)

5 Postwar planning in the transport infrastructure sector

5.1 The 1944 Transport Committee

The government’s takeover of roads was effectuated during the Second World War, while the nationalization of railroads was spread over a number of years and completed only in the 1950s. As the war ended there was a concern that the economy would run into a situation similar to what had happened in the 1920s with a strong demand for import goods, which would foster inflationary tendencies and make the external balance of the country difficult to handle with a risk for shortages of foreign currencies. Therefore, it was widely argued that consumption and investments had to be monitored and controlled in order to be kept within reasonable levels and directed to the most important sectors.

The transport sector was one of the areas in the economy where a strong demand for both consumption goods (cars and as a consequence fuel and maintenance services) and for investments could be foreseen. Demand for both of these areas had been accumulated during the war, and this demand would mainly be met with a strong growth in imports. This was the fear in the government. There were only few domestic car and truck producers, with only limited production capacity. Import of fuel for the growing transport sector was another concern. In relation to the view that road transport would bring risks for the external balance, railroad transport was by many seen as the domestic alternative, with a lower dependency on import goods for its operations (see SOU 1947:85, pp. 51-52). It was in this environment that the government began its planning for a postwar transport policy.

By 1943, the government initiated the postwar planning in the transport sector. It was, however, not until March 1944 that the Transport Committee started its work, presenting its final report in 1947 (SOU 1947:85). The terms of reference focused on the need for analyzing how the coming growth in transport demand should be accommodated, how the available workforce should be utilized most efficiently in the transport sector, and how the balance between railroad, road and maritime transport should be struck in a long-term perspective. The needs of business life should be the focus of the analysis. Private transport needs, especially by car, was seen as a luxury that could not be the focus of the transport policy.

The Committee chose to emphasize efficiency of the transport system as the overriding aim and focus of its analysis. The perspective was based on a dynamic market development view of the economy. According to this view, technological change, the effects of regulations, and the general economic development would interact and shape the market situation in the sector. The basic view of the Committee was that transport should be seen as a service sector in relation to business life and society at large. Therefore, according to the
Committee, there was a complicated and interrelated relationship between transport policy and economic policy, both in respect to structural policies and business cycle-related policies. The activity that had the highest priority from a government perspective was investment planning, where the coordination with other policy areas was very important.

The transport sector, as the situation was described in the 1940s, was lacking, to a large extent, the necessary coordination with other policy areas, and especially when it came to investment planning. Therefore, the Committee proposed the establishment of a new government agency, the Transport Board that should be analyzing and advising the Ministry of Communication before its decisions on resource allocation for investments. The Transport Board was also suggested to have a role in the regional and physical planning of, for example, localization of housing and industries.

The overriding principle for the management, planning and financing of transport infrastructure was defined to be to aim for efficiency, expressed as the highest possible output in relation to the resources used in the sector. In addition to this a principle of full (business economics) cost responsibility in every single transport mode was set. The goal was, however, not to maximize profits but to reach a normal profitability opening for a good transport standard. The Committee's view on the efficiency goal for transport policy also included that only rather narrowly defined costs, directly connected to the road or railroad systems, should be part of the cost basis that should be covered by taxes or other financing. External effects of transports were discussed in relation to other policy areas like social and regional policies but were not considered to be possibly calculated in economic terms.

There was also a discussion in relation to the goal structure of whether transport infrastructure assets, as they were owned and financed by the government, should be provided for free to the users. The Committee, however, took it for granted that the government would not support such a policy and, more importantly, profitability as an overriding goal was seen as "a good measure of and incentive for efficiency in terms of the highest possible output in relation to resources employed". Overall, the Committee had a positive view of the value of free enterprise and competition as a basis for the development of a sound and efficient transport system.

Dynamism, technological development and competition were seen as a better basis for development than a government controlled development or "dirigisme". What was also taken consideration was that a system based on free enterprise at some points in time tends to lead to the utilization of too many resources, and perhaps especially in infrastructure intense areas. The Committee, interestingly, noted that this oversupply of resources, to a reasonable extent, was something that must be accepted in the long term in order to have a sufficiently dynamic development.

As an effect of the public ownership of the main transport infrastructure assets the government, according to the Committee, to a high degree had to focus its interests on the organization of and general conditions set for the government agencies responsible for the management of these assets. As no market forces were at hand to push the efficiency other measures were necessary. The Committee proposed three measures in this respect:

- establishing the Transport Board;
- reorganizing the Railroad Administration; and
- establishing a separate government account and budget structure for road management (the road fund).

The proposal for the establishment of a Transport Board has been previously discussed. The reform of the Railroad Administration was directed mainly at strengthening the economic
and strategic management and planning functions of the Administration. This should be ef-
fected by establishing a Board of Directors to advice the Director General and by adding
minor extra resources to the economic planning function.

As for the financing of the road sector a special principle was used in the govern-
ment’s accounts and budget, already from the time when taxes on fuel and vehicles were
introduced in the 1920s. Revenues from these taxes were separately accounted for in a fund
(separate account on the revenue statement) within the state budget, with the implicit prin-
ciple that the costs and revenues should equal each other over time. This had been the basic
principle when the fuel and vehicle taxes were introduced in the 1920s (Liljegren, 1995, p.
32).

In this respect, the Transport Committee proposed a more developed model for the
handling of the government’s accounts of the road sector. A separate and elaborated fund
structure for the public road sector should be set up. The balance sheet of that fund should
record on the asset side the road system, valued to either its present value or historical value.
The debt side of the balance sheet should include the government’s capital and a deprecia-
tion account.

The profit and loss account should record the revenues from vehicle and fuel taxes
and some additional general taxes. On the cost side, administrative costs, maintenance and
depreciation, and finally a capital cost should be recorded. The yield rate applied for the
government capital should, according to the Committee, equal the government’s average
borrowing rate.

The need for investments in the road network was calculated to between SEK 1.5-2
billion for the coming years, both for meeting deferred investments from the war years and
for the necessary development of the road network in general. This spending need should
be met firstly by special road purpose borrowing by the fund, and secondly, and possibly, a
raise of the vehicle and fuel taxes. Borrowing should be used only for the most profitable
projects with a high social net value.

The fund construction was intended to strengthen the business economics perspec-
tive as a basis for road management and thus to foster efficiency. As part of this model, vehicle
and fuel taxes would resemble fee-like financing instruments more than general taxes. The
fund construction should, however, not lead to the use of other prioritization criteria that
were previously considered. These decisions should be made after analysis by the respective
agencies and the new Transport Board, and not solely based on business economics criteria.
1944 Transport Committee’s proposal for a revised transport policy

The 1944 Transport Committee’s proposals were, according to Sannerstedt (1979, p.5), never followed by any explicit proposals by the government. When reading the yearly budget bills of the government for the years following the war, these were more or less entirely focused on the need for tackling the overriding economic policy dilemma with a strong growth in consumption and imports, and the need for major investments in most areas of the economy. The government seems not to have been open for or prepared to propose a coherent transport policy in this situation. The preservation of macroeconomic stability and the handling of short-term imbalances in the transport sector was instead the main focus.

Another possible way of interpreting the decision not to opt for a transport policy proposal can of course be that the Committee was seen as having delivered proposals that were not in line with the Social Democratic government’s policies, with a focus on central planning and support for public sector intervention in many sectors of the economy. In contrast to this, the Committee was clearly market friendly and based in a belief of the single entrepreneurial force for the economic development, exemplified by the citation at the beginning of this paper.

The Committee in these aspects seems to have been influenced by theorists such as Schumpeter and perhaps also Hayek with their strong support for free enterprise and the entrepreneurial stance in their analysis of business life and growth. Sannerstedt (1979) argues that the Committee being dominated by business sector representatives was lacking political support. There were no representatives of Parliament in the Committee, an exception from the general principles for government committees of the time. Of course, this fact might also explain the weak political support the Committee proposals had.
Even if there were few clear signs of government action based on the 1944 Committee, its proposals were, however, used by the following Committees analyzing similar questions as a starting point for the discussion of the postwar transport policies. This will be exemplified as the work of the 1950s Committees is analyzed below.

5.2 The 1950 Long Term Economic Policy Committee

The next time transport infrastructure investments were discussed as a combined policy area was in the 1950 Long Term Economic Policy Committee (SOU 1951:30). Concerns were expressed by the Committee with regard to the projected strong demand for different investment purposes in the economy in the coming years. The Committee foresaw major investment needs in the government’s different expenditure areas, and suggested that the government analyze the investment demand and both investment control and management thoroughly. The Committee expressed an overall concern that the stability of the economy would be put at risk if all investment and consumption needs be met in a few years. The Committee proposed that some kind of investment control and management should be set up in order to stabilize the development.

In the transport sector a strong growth of vehicles and transport volumes was forecasted as a result of the shift from public transportation to more individual transport modes. The low investment volumes in roads following the war were also seen as a problem. Still in 1950 the investment volume was below the numbers registered in the late 1930s. A calculation was presented by the Committee showing deferred investments of SEK 759 million for the period 1930-1950, compared to expected investment volumes for the same time-period, would the investment level had been upheld on pre-war levels.

The proposal was to first try to reduce the imbalances that were an effect of the low investment volumes during the war. After that a strict prioritization to the most necessary needs in the transport system should be the focus. For railroads a yearly investment level of SEK 250 million was projected and for roads SEK 4 500 million for the following 20 years. For roads this yearly investment level was SEK 100 million above the 1950 level. The level for 1951-1955 was suggested to stay at slightly higher, SEK 289 million (including grants to local government administered roads).

6 The financing of the expansion of the road system

The government committees working since 1944 had presented different forecasts for the necessary road investments in the years to come. There was, however, no coherent view on the investment needs in the transport infrastructure sector in the beginning of the 1950s. On the one hand there was a concern, voiced by the Long Term Economic Committee’s report, that investment needs could not be met without risking the economy’s overall stability. On the other hand, there was an apparent growth in road transport that had to be met by new investments. The financing of the road system’s costs had to be changed in some way to meet the challenges in the new situation. If the government was uninterested in opening alternative financing sources, the revenues of the present system had to be carefully directed to the projects that were most highly prioritized.

One way to address these questions was to look for possible new revenues in the tax system of the road sector for possible new revenues. Another committee, The Motor Vehicle tax Committee, was therefore organized by the government. It started its work in 1951 and reported in 1953 (SOU 1953:34). As in the case of the Long Term Economic Committee this committee was organized by the Ministry of Finance. The Finance Minister made it clear
in the terms of reference for the Committee that, “The starting point for the Committee should be the general principle that motor-vehicle transport still covers the costs incurred by that same transport”. Thus, the earlier decision that each transport mode should cover its costs, as represented by government spending (cost) in each mode, was still the overriding principle.

Deficiencies in the tax system of the time were described in the terms of reference to be that the mix between taxes on gasoline and other fuels might have to be adjusted, since heavy trucks fuelled with low taxed diesel had grown sharply in numbers, and that the balance between taxes on different vehicles and fuels should be analyzed. The purpose here was to make heavy trucks pay a larger proportion of the costs of the road system, corresponding to the costs they incurred in terms of higher construction and maintenance costs, compared to that of a car-based system.

The revenue demands of the government in the road sector were to be analyzed and set by the Committee in comparison with the projected costs of the road system and in accordance to a “somewhat longer time perspective”. This made the forecasting of long-term needs for new construction and maintenance another focus area for the Committee.

Besides, the principle that the government’s cost of financing the road system in each year’s budget was to be met through tax revenues based on the road traffic, the 1944 Transport Committee also had suggested that it should be analyzed whether financing through loans should be used for new construction and reinvestments in “productive roads”. The questions had also been raised by single members of Parliament as late as 1953. Therefore, the Committee made an analysis of the use of loans for financing, which was presented in the report.

Comparisons were made with a number of other countries in Europe when it came to the financing and tax systems that they used. All through the report it was obvious, however, that there was a focus on experiences from the US. A number of examples from the US highway system were pointed out and presented as good examples of financing principles, traffic projection techniques, and road construction and maintenance principles.

The Committee presented its view on the “cost responsibility principle” (kostnadsansvarsprincipen), which the Committee considered to be the basic principle in the financing of the different transport modes since the 1940s. The principle meant that “all the costs incurred by any single transport mode” should be covered by that same transport mode. The Committee went on to discuss different theoretical views for calculating the benefits and costs of a road network, which came close to welfare economics principles. At the same time it was stated that the cost responsibility principle was mainly based on business economics principles.

The Committee also discussed the use of road traffic and vehicles as a basis for general tax revenue purposes. That is for purposes other than financing transport infrastructure as such. Here the verdict was clear. The Committee could see few, if any, reasons or situations in which a general tax revenue motivation could be justified. Only in cases where there was a major crisis, either in war times or when the overall macroeconomic balance was threatened, could such measures be adequate. In a table presented in the report the total revenue from vehicle taxes from 1923 to 1953 was compared to the government’s expenses for road purposes during the same time. This comparison showed revenues of SEK 4 420 million (including some wartime measures) and expenses of SEK 3 871 million, thus an over-taxation of (except war taxes) of approx. SEK 241 million over 30 years.

The Committee presented a number of principles with regard to the financing of the different transport modes. This presentation showed that a number of simplifications had
been made when calculating the costs of the transport modes over time. Several breaches of the basic cost responsibility principle had also been made, often in favor of railroads.

Thus, the government’s railroads had, since the beginning of the 20th century, admitted reductions and special write-offs of the assets invested in the railroad network for old railroads and for railroad sections with limited traffic, for example. By the beginning of the 1950s, the Railroad Administration had only to account for interest rates and depreciation for approx. 50 percent of the infrastructure assets in its balance sheet. These assets had been financed through loans and injections of government grants and subsidies, but only to a minor degree by funds from the internal operations of the Administration.

Even after the heavy write-offs and exemptions it was, however, still difficult for the Administration to reach the profitability goals and major additional exemptions that had to be allowed in that part of its operations. At the same time, the active side of its operations (expenses and maintenance costs) was, however, reported to being able to cover with revenues of the Administration’s business operations. Yet, for railroad infrastructure, the cost responsibility principle was largely never implemented.

For roads it was noted by the Committee that all government costs for construction, re-investments and maintenance were covered by the revenues from road transport taxes. Also, government’s grants to local governments’ roads were covered by that same revenue, as some of the costs of the government agencies’ costs. For the Road Administration only 50 percent of wages were covered by road and fuel tax revenues, while the remaining costs were paid for by general tax income. Generally in the road sector the yearly expenses (for maintenance and construction projects, etc.) were met by yearly appropriations through the government’s budget. Costs for the invested capital (both interest rates and depreciation) were not reported as costs of the road sector. In this respect the cost responsibility principle was also not fully adhered to in the road sector.

In discussing which cost measure should be used for the definition of the cost base when calculating the future financing needs, the Committee used two basic principles:

- Road use measured from the cost side (“nyttokostnad”), that is the extra (marginal) cost each user induces to the system; and
- Road use measured from the benefit side (“nyttovärd”), that is the marginal benefits every single user receives from using the road.

The Committee saw these two concepts as fairly comparable. Their view was that the basic principle in Sweden for road cost calculation and assignment of costs to different users had historically been the benefit measure. Those property or landowners that benefitted from a road should also be responsible for the costs of the road. This was the basic principle in the 1891 legislation on rural roads in Sweden. However, this principle had, according to the Committee, been altered in the 1920s as vehicle and fuel taxes were introduced. From this time forward the focus had changed to the costs induced by different types of vehicles. The growth of government grants to the local and rural public roads was seen as a next step in furthering the cost perspective. With regard to the nationalization this principle had been dominating.

The benefit perspective might be seen as coming closest to the perspective in welfare economics, where the costs and benefits connected to transportation carried out on roads and other transport infrastructure systems are calculated. The Committee also discussed benefits from roads other than those closely connected to the users such as cultural values, military use, transport for public purposes such as police, firearms, and for other infrastructure means including postal services and telephone. The positive and negative wealth effects of
road construction, such as improved accessibility and/or reduced value due to infringements of land, were also discussed.

On balance the Committee found that the cost-based principle seems to be the one that is most in line with the cost responsibility principle. This finally motivated the Committee to choose this principle for the calculation of the costs, which were to be split between different vehicles and users.

To reach a conclusion on which tax levels to propose for the future, which was expressed in terms of the coming five years (1955-1959), the numbers of vehicles, the expected driving lengths and fuel consumption, as well as the mix of cars, buses and trucks were forecasted. Furthermore, the costs for the road system in the same time period was forecasted based primarily on reports from the Road Administration.

As the Committee summarized all of these principles and forecasts, it also discussed the possibility of financing the system through fees or tolls on roads. These measures could be an alternative to fuel- or vehicle-based taxes. Reference was made to fee-financed roads in the US, exemplified by turnpikes in some states. These were, however, not seen as a viable alternative in Sweden. On the one hand, the road system would have to be reorganized into financially sound business units, a task that was seen as difficult to perform in Sweden. On the other hand, this would be a break with the principle of cross-subsidization, which had been a basic idea behind the nationalization of the rural roads as recent (at the time) as in 1944. Such a system would also represent “a backward development to an older road-financing system”. Thus, road financing was rejected by the Committee.

The proposal to finance construction of roads with loans was also finally turned down by the Committee, as was any taxation other than for cost-based reasons. The proposal was that a rather drastic change of the fuel- and vehicle-based taxes should be made with an overall hike of the taxes by 28 percent. Buses and trucks would see its taxes raised by 66 and 46 percent, respectively, while taxes on cars would be raised by 12 percent. The costs induced by wear and tear from buses and trucks were to be given a more direct impact on the tax levels in the proposed system compared to the existing one at the time.

The government presented its proposal to Parliament in 1954 (1954:112). There had been a number of critical comments to the Committee’s proposals that were commented on in the bill. On the one hand, the Road Administration, the National Audit Bureau (Riksräkenskapsverket), the National Board of Trade (Kommerskollegium), and a number of county administrative boards held the position that the transport flow projections were too low in the report. The Road Administration added that the projected costs, both for investments and maintenance, were also too low. On the other hand, the spending projections were seen as too low and expressed by these organizations. The Minister concluded that it was reasonable to raise the projected transport flows in relation to the proposals by the Committee, a change that would also accommodate views expressed “by the motorist’s organizations” (p. 23).

The Minister also expressed openness for discussing the necessary financing level based on a broader base than the Committee (p. 57), where industrial policy and regional policy could be considered as support for road investments. At the same time, the Minister went on to state that the basic principle should be that the road system be financed by the sector itself. There should be no deviations from that basic principle.

It is interesting to see that the Minister went on to propose a lower rate of tax increase than the Committee had proposed, 11 percent for the coming year and 14 percent for the two years following that. In comparison to the 28 percent level proposed by the Committee this is definitely a lower level. However, the lower level was accommodated by a more optimistic projection for transport flows in the coming years, and thus higher revenues. A lower
raise in tax would thus suffice to collect the necessary funds.

The Minister also commented on the long-term financing of the road system. He concluded that the 1951 Committee had not proposed the introduction of a loan-based financing system, but that a system nevertheless should be sought where costs were evened out over the business cycle. Here, the organizations representing the motor and road interests had been more offensive than the Committee, proposing that a special analysis be carried out to define which projects could be financed by a borrowing system. Since a drastic growth and investment in the road system was expected, loan financing could be a method to spread the costs for the system over time and not overtax the current road users during the construction phase. The Minister proposed that the 1953 Transport Policy Committee look into the question of a possible loan system for financing (p. 67).

With a new tax system for road transport in place the scene was set for the coming expansion of the road system. The government had laid down one important piece of the framework for its ownership of transport infrastructure, and now the need for a strategic road program for roads and additional measures for the railroad system came into focus. However, before this was implemented another layer of macroeconomic analysis was added to the discussion.

The 1955 Long Term Economic Committee (SOU 1956:53, p. 33 ff) presented a more cautious view on the coming expansion of road transport and the road system than the earlier analyses. A broader macroeconomic analysis was presented showing that the growth of motor vehicle-based transport could not be seen as challenge only to the public sector’s investment budgets. The private (private car use was the focus of the Committee) sector expansion of car ownership could be seen as consumption and should be balanced towards other consumption needs. Yet, there would be other considerable costs connected to the growth of the motor transport system, in other words resources for maintenance and fuel distribution, which would put severe pressure on the overall available resources and their utilization in the economy.

The Committee concluded that it had to be considered if higher fuel and vehicle taxes are necessary in order to meet the strong growth of the motor vehicle system and car use at large. Such higher taxes, according to the Committee, could also make the system more balanced and help to avoid congestion, something the car users would gain from on balance. As for the plans for road construction plans for the coming time, the Committee suggested a lower growth rate in the plans than had been presented earlier in the 1950s. A focus should be given to commercial transport, central transport needs in general, and to bottlenecks in the system.

7 Long-term new construction plan for the road network

For the long-term planning of roads and for the overall resource planning in the transport infrastructure sector at large, an official projection for the long-term development of road transport volumes was vital but lacking. To develop such a long-term plan was therefore the focus of the Delegation for General Road Planning, a government committee that reported in 1958 (SOU 1958:1).

The Committee was influenced by the development in many other Western European countries and in the US. Major investment plans, based on a projected growth of road transport of 200-300 percent until the mid-1970s were developed in West Germany and in other European countries. The construction of the Interstate Highway System in the US was another source of inspiration for the Committee. The Committee noted that these major road plans were mainly financed by taxes based on fuel- or by vehicle-based taxation,
which seemed to be the blueprint for financing of the time.

The focus of the Committee was the 10 years between 1958 and 1967. An elaborated planning method was developed and implemented in the analysis carried out. All parts of the country should be provided with a road system of reasonable quality and standard, while paying special attention to areas with intensive traffic, mainly in the three major cities of Stockholm, Gothenburg and Malmö.

The starting point of the planned road system, with a basic standard throughout the country but varying according to traffic volumes, was the already present system. It was made clear early in the analysis that it would only be possible to make additions and quality improvements to that system within the economic frameworks stipulated by the government. A few major new roads were presented and planned, mainly for motorways connecting the three big cities, and for these connections only the most heavily used sections would have the highest quality standards. The decision to go for the planning principle where the cities were connected by new roads, rather than to go for completely new roads, was also an effect of the same reasoning. Completely new road sections outside the cities would have been too expensive. They would probably also have brought political difficulties on regional and local levels when implementing the system. At this time cities would not like a new national road to bypass the city center.

The plan was developed based on the basic view that there was (still by the late 1950s) a major lag in the investments originating in the low levels in the 1940s and 50s. Combined with the strong growth in traffic that had already been recorded and was projected, major investments and increasing maintenance costs were foreseeable.

In relation to the rather elaborated strategic physical planning presented by the Committee, the economic plans and projections were less developed. Based on the projected tax revenues in the 10-year planning period, which were in turn a result of the traffic forecast, an available amount of SEK 14.3 billion was presented as an upper limit for the economic planning. This was to suffice for national roads, local government’s roads and for grants to private roads. Maintenance costs were also to be covered by these revenues. The available amount for national roads was set to approx. SEK 8 billion, which was seen as sufficient but rather limited.

There was an attempt to calculate the social economics benefits of the proposed investments, if only very briefly. Thus, the direct positive effects (mainly reduced travel time) were calculated to equal a value of SEK 10 billion for that same planning period. A calculation from the Swedish Road Association showing more than four times higher positive benefits was also presented, but without the Committee making a clear statement of its view of that estimation.

Other funding sources than tax revenues were not at all considered in the report.

In the following discussions around the Road Delegation’s proposal, it is most striking that neither the government nor Parliament seemed to be prepared to make any long-term decisions on the road plans. This was, for example, reflected in Parliament’s State Committee (No 9, 1959), which was not prepared to make any decision based on the road plan covering more than the following year. The government and Parliament obviously were not willing to be caught in long-term plans for road construction and maintenance.

This was also the view that had been expressed by the State Committee in Parliament one year earlier (No 6, 1958A), as the government’s budget for 1958/59 was discussed. The Minister for Communication had presented a proposal for a yearly raise of the appropriation for road construction of 10-15 percent, which the Committee had agreed to as a principle, but at the same time pointing to the need for a long-term plan to be presented for the road network. Now, as the plan was at hand, Parliament was still keen on preserving its
discretion to come back to these decisions in yearly budget processes.

As for the proposal that the Road Delegation had presented, Parliament’s State Committee, despite its request for a long-term plan a year earlier, was more focused on solving short-term questions than dealing with the strategic issues. Thus, the Committee provided a rather different agenda for the development of the road system with focus on short-term measures for roads where maintenance had been deferred, for improvements in cities and on bridges, and in general with a focus on commercial transport.

To accommodate car transport needs other than work-related transport should not be the main priority according to the State Committee, and motorways could be given lower priority than those proposed by the Road Delegation. For long-distance transport the State Committee was also mainly interested in furthering railroad transport rather than road transport. Its view was that the Road Administration should be asked by the government to revise the road plan based on the views expressed by the Committee.

In proposals in the 1959 parliamentary session (I:118, II:144), from a group of MoPs representing the right wing liberals (Högerpartiet), two questions in relation to financing were raised. On the one hand, alternative financing of roads was asked for, specifically for bridges, but also for a wider range of projects. On the other hand, it was stated that tax revenues from motor vehicles and fuel should not be used as a general tax base for items other than the road system. With regard to alternative financing, references were made to the situation in the US with more projects financed by tolls. These MoP proposals were finally left without any consideration by Parliament.

8 Toll road financing – a dead end?

The presentation above outlining the government’s discussions concerning financing of the transport infrastructure sector shows that alternative forms of financing, such as toll-roads, had not been the focus since the nationalization of roads and railroads. Three major government committees had been working with closely related questions during the 1950s; however, all had rejected the introduction of road financing even if it was lacking for the planned road construction program. A special committee was created by the government in 1960 to delve into exactly these questions. This initiative came from Parliament and one of its standing committees (Tredje lagutskottet). The question partly had its origin in the aforementioned two MoP proposals, which had been reiterated in Parliament in 1960 (I:75 and II:90). Additional proposals from MoP (I:458 and II:550) in the 1960 parliamentary session had also raised the concern that important investment projects would not be possible to build within the budget framework set by the government’s financing mechanism for road construction, and alternative financing measures should be analyzed by the government.

These proposals had been sent to a number of external organizations to allow for comments. Organizations representing business life at large had been positive towards the proposed opening for private funding, besides the basic government responsibility for transport infrastructure financing, which is a responsibility that was explicitly pointed to by the same organizations.

Parliament’s standing committee had asked the government for a special study to be carried out with regard to the possibilities for opening fee or toll financing of bridges and tunnels. As a prerequisite, concessions should be given to those corporations that were interested in initiating projects of this kind and only major and important projects would be open for this type of financing. The study should also analyze how government-owned roads could be opened for fee financing.
The Special Road Committee which was set up by the government to deal with toll financing presented its (rather short) report in 1962 (SOU 1962:26). The Committee made some references to experiences from toll and fee financed roads in the US and Norway. The US experiences were said to be difficult to compare to the Swedish situation, while the experiences from Norway were seen as more easily transferable. However, in Norway the Committee noted that the government had a much more limited responsibility for the road network than in Sweden. The Committee also clearly focused on single major projects like a bridge between Sweden and Denmark (Öresund) and from one of the major cities on the east coast (Kalmar) to the second biggest island, Oland in the southeast of Sweden (Kalmarsund).

The difficulties in financing any projects outside the plans presented by the 1958 Delegation for General Road Planning (see above), which finally had been framed as an 8.5 bill SEK program, was one of the reasons for the Committee’s work. The Committee, however, while arguing for some possible fee funded road projects, pointed out the difficulties a system with mixed financing would bring when it comes to prioritization between different road projects.

With the possibility of opening toll roads, as the Committee suggested, the planning system might run the risk of being circumvented by these private projects. This would in turn risk reducing the efficient use of available resources from a general economic perspective. There were also concerns as to whether such additional projects would make other important investment needs in the economy lack the necessary resources, thus a risk of crowding out of other investments was foreseen. A third obstacle that the Committee discussed with regard to toll roads was that road transport users already paid taxes for fuel and cars; therefore, there might be reluctance among the users to accept new fees if toll roads were introduced.

The Committee also noted that revenues from road transport taxes were not used for road purposes. As of June 1961, SEK 750 million was reported as a surplus in the road construction fund in the government’s accounts.

Finally, the Committee presented a proposal for a new law on toll road financing. The law proposal followed the general ideas in the Committee’s work. Toll roads should be permitted and measures were suggested for how to bring the planning of such roads in line with the general road planning procedures. The contents of the concessionary rights were regulated, where toll roads were supposed to be left over to the government without any compensation to the toll road corporation after the expiration of the concession.

The proposals from the Committee were coordinated by the government with proposals from the Transport Policy Committee, working in parallel with this Committee. The government returned to the financing issues in a proposal to Parliament in 1963.

9 1963 Transport Policy – a deregulation turn

The future transport policy was the focus of the 1953 Transport Policy Committee, reporting in 1961 (SOU 1961:23); this time the government asked for the development of a more coherent policy. In its proposals to the government it presented a fairly market-oriented transport policy focusing on further deregulation. The basic idea with the business economics framework and the cost responsibility principle were, however, the basis for the new policy proposals, which were the same principles that had been in effect since the 1940s.

The overriding goal for the future that the government expressed in the terms of reference for the Committee was that a satisfactory supply of transport means should be safeguarded throughout the country, while at the same time securing cost minimization
under business economics efficiency and a sound development of the transport sector.

The Committee initially presented its view on the developments in the transport market since 1945. The strong growth of road transport, the difficulties for the Railroad Administration to run its operations without deficits (which in 1958 had led to a need for subsidies), and the growing importance of the domestic flight market were ingredients of the recent development. Many of the deficiencies of the markets that the Committee noted were seen as originating in the remaining regulations. These were exemplified by the obligation for the Railroad Administration to continue services on a number of minor railroads, the cap on railroad fees and the rather extensive regulations on road traffic, often originally based on a concern to shelter the railroads from overly strong competition. The Committee concluded that the natural monopoly situation that the railroads used to operate under had been more or less dismantled due to the fierce competition from road traffic that had gradually developed.

The Committee saw two different ways ahead to achieve the goals that the government had outlined in the terms of reference:

- Strengthen the regulations or
- Deregulate and open up for free and effective competition.

The Committee chose the latter alternative. The alternative to strengthen regulations was not seen as reasonable considering the market economy environment Sweden operated in. The Committee instead focused on a discussion about how to achieve the goal of free and effective competition. This made deregulation one main focus of the Committee, which was partly to be implemented through the dismantling of the specific regulations for the Railroad Administration. If the political system was also interested in preserving traffic on unprofitable railroad lines in the future, specific government subsidies, according to the Committee, should be extended to the Railroad Administration.

The basis for the efficiency of the system was that the true costs of the different modes were reflected in the prices that the transport users paid. This was a direct link to the cost responsibility principle of the 1940s. This would make the choices by transport consumers in each situation efficient and lead to a subsequent division of transport flows on the different modes according to their relative strengths. Since the external effects of transport were seen as rather limited, except for capacity shortages in the Stockholm area and to some extent in the two other major cities, and traffic safety considerations were only slightly mentioned, fees and taxes based on business economics (financial) costs would more or less equal social costs. Thus, according to the Committee there were basically no major differences between a business economic and a welfare economic perspective for the transport sector.

Another starting point in defining the government’s role and strategic policies in the sector was, according to the Committee, to define a minimum transport supply for all parts of the country. The transport system should be given the capacity necessary to fulfill the crucial transport needs from the society’s view. As a consequence, a transport infrastructure system to allow for these transports to be carried out had to be defined. This should be done based on an analysis including the costs of supplying the transport services in relation to the number of people serviced. The cost for the public sector to uphold this service should, in the end, always be compared to the number of passengers that were demanding the transport. Too few transport users could not demand too much government support. It was foreseen that primarily passenger transport should be the focus of these measures. Freight transport was believed to operate more or less without subsidies.
The way cost-based fees and charges were seen to be transferred to the transport users were through the principle that government's spending for investments and other costs for roads would be set equal to revenues from road taxes. Through the abolishment of other than justifiable business cost elements for the Railroad Administration, the railroads would be given an equal playing field in the transport market. The Committee noted that the principle did not fully work for air transport and for maritime services, where the full costs were not always charged to the users. However, the Committee concluded that the need for reaching a relevant and correct cost base for road transport was the most important issue.

The Committee also discussed marginal cost-based pricing principles, which were said to be correct pricing principles for the existing network at any given time. At the same time the Committee held the view that for new construction the users should be charged the full costs of the projects. The two principles seem to be inconsistent. In a situation with a strong projected growth, full cost coverage would, however, set a framework for the total investment volumes. There had been concerns over risks for over-investment earlier in the 1950s, for example reflected by the 1950 Long Term Economic Committee, and these concerns could be met by this double-sided pricing policy.

![Figure 5](image_url)

*Figure 5*

1963 Transport Policy framework – as proposed by the 1953 Transport Policy Committee

The demand for different transport modes and transport services would be the basis for the investment decisions in the proposed model. Based on the projection for the future demand and transport flows the government agencies would, in close cooperation (this is pointed out a number of times), present a plan for the investments to be carried out in the future.
A close coordination between the government agencies and the local governments was an additional feature of the planning system in the Committee’s proposals.

It was explicitly stated that the necessary coordination and central planning of investments that followed the government’s ownership of transport infrastructure should not be seen as a breach of the model with free competition. Coordination of investments was, according to the Committee, instead a direct parallel to what happens in major industrial corporations, where different investment needs are coordinated in one investment and budget process. For a developed discussion on coordination dilemmas in transport infrastructure see Hasselgren (2013).

The Transport Policy Committee’s work, and related proposals from the 1960 Special Road Committee, was commented on in the government’s proposal to Parliament in 1963 (1963:119). In the government’s proposal the overriding goal for transport policy was reaffirmed, as stated in the terms of reference for the Transport Policy Committee in 1953. However, two additional goal areas were added: an orientation towards good traffic safety; and that technological development should be stimulated in the sector.

The external organizations that had commented on the proposal from the Transport Policy Committee were largely positive. The focus on competition between the transport modes and on business-like conditions, in combination with preserved government funding, was largely welcomed. The business life organizations and the road and motor organizations were positive, but had some comments in relation to the goal of preserving a good transport supply in all parts of the country. This was mainly a passenger transport related problem area and often connected to the railroad system. Roads should in general be seen as the “first-hand alternative” when it came to investments, according to the road organizations.

Both the need for public sector subsidies to public transport means in the major cities and the capacity restrictions that had started to become a difficulty for railroads were also raised in the comments to the report. A concern from competitors of the railroads, which should be given more subsidies according to the Committee, was that this would go against effective competition. The dominating domestic flight corporation at the time (Linjeflyg) was concerned that the idea of combining a good transport network throughout the country with the focus on free competition might lead the government to subsidize parts of the transport system, such as the domestic flight sector. This would risk making the transport policy inconsistent with the principles of free competition and full cost coverage.

In its proposal to Parliament the government essentially endorsed the proposals of the 1953 Transport Policy Committee. In relation to investment planning the Minister of Communication expressed the view that since transport infrastructure investments were to be financed by the government without direct demand impact from transport users, it was important that social economics profitability for different projects was made into the overriding prioritization method in the sector. Here, in contrast to the competition-friendly policy that should mark the relationship between the transport modes, a close coordination between the transport modes when planning and, hopefully, between the public and the private sector thus was emphasized.

One of the conclusions in the government’s proposal was that toll roads should not be made part of the road system in Sweden. According to the Minister, the principle of government funding of roads had “since long” been accepted in Sweden. The 1960 Special Road Committee had also concluded it would cause difficulties for the overall planning of the road system if toll financing was introduced. Prioritization between different projects would, for example, be made more difficult. In addition this toll financing, also according to the Minister, only to be considered for a few possible bridge projects, of which there was
only one at the time; the Kalmarsund bridge. The Minister could see no reason to change the basic principles of the road sector’s financing based only on needs in relation to this specific project. Therefore, it was suggested that the proposals presented by the Special Road Committee should not be implemented.

Here, the government had met more diverse comments from the external organizations and government agencies. The business associations (confederations, chambers of commerce, motor vehicle organizations) were thus largely more positive towards toll roads than the Special Road Committee had been. The organizations forwarded the view that the Committee had been too critical towards the experiences from other countries in its report. The difficulties with prioritization, where toll roads are introduced, had also been handled too critically. Fee financing should also be possible for a wider number of projects than the narrow focus on bridges and tunnels in the Committee’s proposal. More or less similar views were expressed by some of the government’s County Administrative Boards (Länsstyrelser). Fee financing could be a method to allocate more resources to the sector, which should not be left without further consideration too easily. This is one of the areas in the government’s proposal where the difference between the Committee proposals and the comments given by external organizations and the government’s final proposal was the most obvious. The explanation can of course be that the proposal for more open financing came from the opposition in Parliament and not from the government.

At the same time there might be signs of differences through the period studied in this part of the report between the ministries. The Ministry of Communication was more positive towards expansion of the transport infrastructure systems, while the Ministry of Finance was more cautious in its stance, arguing for a less drastic expansion of the road system. Ideas around the future development of the railroad system with a more efficient structure and more efficient transport solutions for railroads were also presented more obviously in the Ministry of Finance’s reports than in the reports from the Ministry of Communication.
PART 3 – WELFARE ECONOMICS IN SWEDISH TRANSPORT POLICY

“…the welfare economic objective has to be the basis for the continued development of transport policy.”

“The transport system has to be coordinated through an appropriate and continuous public sector traffic planning…consistent with guidelines…set by the government.”

1975 Transport Policy Committee (SOU 1975:66, p. 44)

10 Background

Parliament’s 1963 decision on transport policy, which by many has been valued as one of the main policy decisions in the infrastructure sector following the Second World War, is the starting point of Part 3. The decision was formally in effect for the coming 16 years. It opened for a restructuring of the transport sector, including transport infrastructure. The road system was expanded, while the railroad system contracted, suffering from high costs and a diminishing market. There was growing criticism during the 1960s towards both the planning practices pursued and the new construction programs for the road system, as well as towards the effects the policies seemed to have for the railroad system.

A shift in the policies came during the 1970s. The 1979 parliamentary decision on a revised transport policy brought a formal end to the policies based on market forces, competition and business economics. The new management philosophy was based on welfare economics, which should be the new basis for transport infrastructure and transport policies when it came to planning, management and pricing/taxation.

As politics was more and more influenced by the need to reorganize and raise effectiveness, and Sweden towards the end the 1980s was running into a financially difficult time, theories and practices sometimes related to new public management were introduced in the transport sector. A stronger focus on welfare economics was therefore combined with deregulation and privatization. In addition, alternative financing was introduced for some infrastructure projects.

An interesting phase in the historical development of transport policy was the 1988 parliamentary decision to revise the goal structure as to reflect the earlier transport policies. A further decision was made in 1998, which established welfare economics as the basis for transport infrastructure policies.

At the center of this paper is the discussion around which perspective should be the basis for charging fees and taxes for the use of transport infrastructure. This is only part of the discussion on transport infrastructure and transport policy, but it connects closely to the fundamental question about whether transport infrastructure systems should be seen and treated as most other areas in the economy, with a cost coverage view, or whether the government should fund the systems through general tax revenue.

11 “The fully developed car society” and the critique

As discussed in Part 2, the 1963 transport policy decision was perhaps more of a confirmation of the policies that had been developed since the government takeover of roads and railroads in the 1930-40s than something completely new. The decision was, however, seen
as groundbreaking in the public debate around transport system development in the 1960s. It has also been the starting point of much debate and analysis within academia (see Sannerstedt (1979) and Bohm et al. (1974)).

Two government committees from the late 1960s reflect the official view and with regard to transport policy. The 1965 Economic Long Term Committee’s final report (SOU 1966:1) and a separate report published by the Committee (SOU 1966:69) on the development of transport and the need for investments in the sector are two such examples. In the Committee’s calculations of the available financial resources for future investments, the focus on roads rather than on railroads was obvious. The basis for the projections was a demand-driven development. In this model, users of the transport systems generate transport flows that must be met by appropriate investments within the limits set by available resources.

The total projected investment level for roads (government and local government) was set at 13.7 percent of total gross national investments by 1970, which represented a growth of yearly investments of 25 percent compared to 1951. At the same time, railroads were projected to use 1.2 percent of the available room for gross investments, a reduction by more than 50 percent in the same time period.

Car transport was projected to grow in order to meet the demand for passenger transport, while train transport was projected to remain more or less unchanged. In general people were seen to have “become used to the car-society” (SOU 1966:1, p. 185). Only when it came to long-distance travel was train transport projected to keep its market share or grow. More or less the same picture was given when it comes to freight transport, as the future growth was expected mainly in road transport.

The separate report on transport and investment needs was even more focused on the projected future strong growth of car transport. Projections for the period up to the year 2000 were presented, and these were based on the vision of “the fully developed car society” (SOU 1966:69, p. 151). The number of cars in use was predicted to be six million in Sweden by the millennium shift, which was a rather bold prediction even for road transport enthusiasts. Compared to the actual number of cars in 2000, approx. four million, this turned out to be a drastically over optimistic projection.

At the same time, the report commented on the development of railroad traffic. The separation of the Railroad Administration’s network in 1964 into a commercial net and a social net mainly directed at servicing rural areas with diminishing transport flows was discussed. The separation had been part of the 1963 transport policy decision and was by this time (1966) the basis for government subsidies to the Railroad Administration. The report reflected on the possible reorganization of the Railroad Administration into a limited stock corporation as a means of adjusting the organizational setting to the current transport policy at the time. Such a change would enable the Administration to compete with road transport, ultimately evening out the playing field. This was the first time this reform was mentioned in a government committee, a reform that was not implemented until 35 years later.

The future development of railroads was seen to result in a further reduction of the railroad network. Remaining parts of the social network were expected to be taken out of service in the medium to long term with a remaining network of around 50 percent compared to the 1965 network. High speed passenger trains and standardized freight (block) trains were seen as the bulk of future train services.

The combined picture given by the projections was a situation with a drastically enlarged dependence on road transport and a parallel reduction of train services. It seems reasonable to assume that this projection was grounds for growing skepticism towards the

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4 Statistics Sweden, Registered passenger cars in use, 1923-2010.
fully developed car society. To see a development where the car fleet more than tripled in size in the coming 35 years was perhaps not only a positive vision for a lot of citizens. Concerns over the long-term effects of further urbanization and environmental effects related to increasing road transport were gaining strength.

The future road planning strategies were further developed in the Road Planning Committee’s final report presented in 1969 (SOU 1969:56). The Committee had been working since 1964 with the aim, as set by the government, to make projections for the long-term development of the road network until 1985. The Committee was asked to make its plans based on a projection of traffic volumes in 1985, and accordingly propose how to meet the demand for road transport with a combination of new construction and maintenance. The proposal should take the ongoing urbanization as a starting point for the work and present a prioritized plan for the future development of the road system based on the profitability of the proposed projects. Which model to apply for these calculations should also be part of the Committee’s analysis.

The Committee presented a projection for the road transport volume and its development for the period 1963-1985, which showed a growth of more than 250 percent, with the strongest growth up to 1975. The need for investments and maintenance of the government’s roads and streets in cities and municipalities was estimated to around SEK 44 billion (in 1969 prices). This growth rate could be accommodated within a strategy allowing for a yearly growth rate of 7.5 percent, as suggested by the government in the Committee’s terms of reference. Such a high increase of investments could, however, not be financed without a higher level of fuel and vehicle taxes should tax income also balance the costs in the future.

The Committee’s proposal was to base calculations of the profitability of single projects in the plan on social economics cost-benefit analysis. Based on a construction and maintenance program, a yearly growth rate of the road appropriations of 7.5 percent was suggested for the period 1970-79, while no specific proposal was given for the following years until 1985.

The Road Planning Committee more or less confirmed the picture given by the 1965 Economic Long Term Committee. Further road construction and a strong growth of road transport were expected. The government’s road policies had to be adjusted to meet the inevitable development, based on consumer demand. There also seemed to be a unanimous support in the government sector around the further establishment of the “car society”.

The government’s proposal in relation to the Road Planning Committee’s work was presented in the government’s Budget Bill for 1972 (1972:1). The government reported that the external organizations were in general positive towards the report from the Road Planning Committee. Many organizations and government administrations were also said to be positive towards introducing cost-benefit analysis as a tool for prioritization in road planning.

At the same time, the government commented on the use of cost-benefit analyses, explaining that these would have to be further developed to take into account, for example, the relationships between transport infrastructure investments and growth and land use planning and housing construction. The government, echoing earlier statements, also mentioned that other grounds for analyzing the appropriateness of road construction plans than cost-benefit ratios were necessary. Nor was the government prepared to make any long-term assessment of the level of financing for road construction as suggested by the Committee’s terms of reference and its proposals.
Criticism towards the car society

As Sannerstedt (1979) has shown there was widespread criticism towards the reductions of the railroad system in the public debate. There were concerns that the technocratic expert stance of the planning system, and a singular focus on roads and car transport, would lead to a society and urban development that was not desirable for many citizens.

One influential and critical stance was reflected in a debate book (“Ska vi asfaltera Sverige?”) by a group of young academics (Anell, Hedborg, Lönnroth and Ingelstam, 1971), critically discussing the effects of the expansion of the road system and arguing for a revised transport policy. One of the points of the criticism was directed towards the strong tendency for expert-based planning that had been a sign of the transport policy and the government’s role since the nationalization. Another point was a critique of the perceived road transport-friendly stance of the transport policy.

How to align the perspectives?

In parallel to the discussion about the development of the road and railroad systems, the government was discussing and analyzing the conditions under which the state-owned utilities should operate. One of the utilities was the Railroad Administration. Following the deregulation steps that had been taken as part of the 1963 transport policy decision, the freedom for the Railroad Administration to set prices and handle its offerings of transport services to the market had been widened. There was, however, a government concern that the economic conditions for the operations of the utilities had to be further adjusted to meet the situation with stronger competition in many markets, such as the transport market. The Committee dealing with these issues, the Public Utility Committee (Affärswerktutredningen), reported in 1968 (SOU 1968:45-46). It had carried out cross-sector analyses comparing the government’s regulations and the management structure in the different utilities operating in, for example, the areas of telecommunications, postal services, transport, and energy.

The Committee discussed (SOU 1968:45, pp. 155-164) the different principles that could be applied for the investment control and pricing policies of the utilities. According to the Committee, either business economics (with a focus on full cost coverage) or welfare economics (based on marginal cost principles) could be applied. The 1963 transport policy decision, with its mix of competition when it comes to operations but welfare economics as a basis for investment decisions, was a part of the discussion in the report. The Committee concluded (p. 166) that the managers of the utilities could be expected to prioritize the day-to-day management of the utilities rather than to make strategic decisions.

The difficulties in carrying out correct and comprehensive cost-benefit analyses and to implement them as a basis for the management of the organizations was seen as a major obstacle against suggesting welfare economics as guiding principles for the utilities. The historical data for the economic performance of the utilities also showed that the railroad system had been developed within the framework of business economics. The available room for investments had essentially been set by the net operating income and depreciation of the Railroad Administration. It seemed possible, according to this view, to align business economics with infrastructure system operations.

Some proposals were put forward by the Committee in order to align the accounting principles more closely to business economics principles and to handle the pension obligations, primarily of the Railroad Administration, with its high number of former and current employees. The Committee, however, did not reach any clear conclusion with regard to many of the strategic issues. Perhaps the main conclusion was that it is difficult, no matter

5 “Should Sweden be asphalted?”
how far the analytical effort is taken, to balance business economics and welfare economics once and for all. The government seemed to lack a clear idea of how to proceed in general. Proposals discussing how to appropriately organize the public utilities were one of the main concerns during the coming decades, often with successive openings for market-like structures and deregulation.

The 1960s was a time when business economics played a large role for the development of the railroad and road systems within the framework of government ownership and tax funding. The cost responsibility principle and the focus on competition had a large impact, paving the way for road transport growth. At the same time the critical voices towards the policies were more and more apparent. Gradually the political system saw a need to respond to this situation.

12 Road costs and welfare economics

The calculation of social costs and benefits of the road system, and the possible application of welfare economics principles for the railroads, was one of the concerns in the late 1960s and early 1970s. Government committee, 1966 Road Cost Committee, worked with these issues at length and reported primarily on roads in 1973 (SOU 1973:32). It proposed a shift in the government’s fees and taxes to become based on short-term social marginal costs. The Committee’s report discussed two main issues: the combination of this new principle with the financing requirement covering total cost, and the business economics principles of the 1963 transport policy. Once again there was, however, no clear-cut solution on how evenly to balance the two principles.

The critique from the above-mentioned academics and Social Democrats was aimed partly at the slow work of the Committee and the difficulties to include all external costs of road transport in the cost-benefit analyses of the time, which were believed to underestimate the cost base of road transport that would be covered by fees and taxes. By internalizing all external costs and adjusting the fee structure accordingly, the true costs of road transport would be reflected in the fees and taxes that the road system users met. It was argued that the further growth of road transport should be held back should this pricing policy be followed.

Another critical stance is represented by Peter Bohm, a well-known Swedish economist at the time active in transport economics, who argued (Bohm, 1973) that the Committee was heading for the right principles for the future, short-term social marginal costs. The Ministry officials and the prevailing transport policy could though, according to Bohm, be expected to work for a too strong focus on the principle of full cost coverage and “the single sided focus on business economic efficiency” (p. 326), which was the basis of the 1963 transport policy decision. The 1968 Public Utility Committee had reflected on a similar line of reasoning.

Peter Bohm presented a number of articles and books at this time that argued for a stronger role for welfare economics in transport infrastructure planning and financing discussions. A general and comprehensive critique of the 1963 transport policy and its effects was published in 1974 by Bohm. Here, the critical voices of the late 1960s and early 1970s, those against road planning, were the starting point of the discussion. It was argued that through a wider use of cost-benefit analysis and economic principles, a redirection of the transport policy focusing more on efficiency should be achieved.

Thus, the prevailing transport policy gradually met a wider spectrum of critical voices. One of the effects was that the government basically stopped further railroad closures.
from the early 1970s. From 1950, when the nationalization of the railroad system was more or less complete, up to 1974, the railroad system had been reduced by nearly 20 percent (SOU 1975:66, p. 123). In a later government bill on transport policy (1978/79:99), the Minister of Communication also referred to a change in the view on transport policy from the early 1970s, with a stronger influence on other policy areas in transport infrastructure planning, such as regional policy and environmental aspects, with more interest for coordination between transport modes than for competition. The transport policies of the mid-1940s seemed to need a revision.

13 Re-direction of policies – welfare economics and fiscal concerns

In order to answer to the perceived need for a renewed transport policy the government decided to set-up a new Committee. The decision on the terms of reference was taken in 1972 for the new Transport Policy Committee. Two major reports were presented: in 1975 (SOU 1975:66) on the general transport policy and in 1978 (SOU 1978:31) regarding the cost responsibility principle and fee structures.

The government pointed out some basic principles for the Committee’s coming work in the terms of reference:

- The development of the transport system should be based on the demand from transport users.
- A business economics basis for the management of the system leads to misuse of the present infrastructure and wrong allocation of new investment in infrastructure.
- There should be an overriding welfare economics orientation of the policies.
- It had been difficult to achieve a situation based on competition on a level playing field, which the 1963 decision aimed for.
- The public sector ownership of transport infrastructure was to be preserved, based on the need for long-term perspectives on planning and the need for coordination in the sector.
- In comparison to the 1963 situation, the political ambitions in other policy areas had grown when it came to economic distribution, regional policy and the need for regional transport sector planning, for example.

The government thus aimed for a redirection of transport policy. The interest from the government in widening the scope of transport policy to include regional policy, environmental concerns, and more active industrial and physical planning policies also widened the interpretation of the policy area of the early 1960s, more so than what was necessary.

The focus on welfare economics and the further development of cost-benefit analysis might be seen as a tool for introducing the new policy goals in the sector other than production economics, or business economics. The Committee expressed the view that the main features of the new transport policy should be the welfare economics goals. Within a framework of government ownership and welfare economics the provision of transport services should, however, be carried out with the overriding aim to achieve business economics efficiency. Once again the need to balance the two perspectives was raised.

According to the Committee, it was a crucial important for the future that the demand from freight transport customers and passengers should be the basis for the development of the transport system. The Committee’s second report in 1978 (SOU 1978:31) focused on the cost responsibility principles and fee structures, advocating that the former cost-responsibility perspective be abolished for both railroads and roads. For roads the
The Reluctant Infrastructure Manager

Committee presented calculations showing that the connection between government revenues from road transport (fuel) and vehicle taxes could be estimated to SEK 7.2 billion yearly, while the social costs connected to road transport could be estimated around SEK 5.6 billion yearly, showing some over-taxation of the road system. Based on these estimates it seems like fiscal objectives might have become more important over time as an argument for the government’s considerations in relation to fuel and vehicle taxes. These estimates also countered arguments used in the public debate around road transport, claiming it did not cover social costs.

The Committee also highlighted the importance of an intermodal view of the transport system. The former principles of per transport mode cost responsibility and competition should be abandoned in order to focus on comprehensive service delivery to customers, rather than only a train or road solution.

While the Committee emphasized the welfare economics perspective with regard to management, financing and planning of transport infrastructure, it also focused on the need for efficiency in the production of services and management of the government agencies in the area. However, only one section was included in the 1978 report (p. 41), which discussed the need to focus on the “internal efficiency” of the agencies (and other organizations) in the transport sector. Little was said in this respect other than that “intense rationalization- and cost-reduction” should be the focus of the organizations, and that “motivation” for reaching efficiency is important, as the marginal cost principle for fees will probably not give the best prerequisites for “internal” efficiency.

In relation to earlier government committees analyzing the transport infrastructure, transport markets and organization, this represents a clear shift in focus. The difficulties in reaching efficiency in the production processes of the transport sector, which earlier had been a highly prioritized issue, were drastically downgraded as an area of interest. Welfare economics efficiency, implemented by cost-benefit analysis as a basis for investment project prioritization and the introduction of marginal cost pricing, was given almost all of the focus.

The government sent its proposal to Parliament in March 1979 (1978/79:99). The 1963 goal for transport policy was to be changed as a consequence of the proposal of the 1972 Transport Policy Committee. The goal was “to offer the citizens and business-life throughout the country a satisfactory supply of transport services at the lowest possible social costs” (p. 12).

The motivation for the shift from the earlier per transport mode focus and the competition stance in the policy was that it had, over time, become more obvious that that there were new challenges for the government from both a horizontal and a vertical policy dimension. The horizontal connections between transport policy and other policy areas such as environmental policies and regional policy were highlighted. The stronger vertical connections between the central government agencies and the regional and local level were exemplified with the developed local and regional (physical) planning, which covered many areas in the society and was carried out by local governments and County Administrative Boards (Länsstyrelser).

On this level a geographical planning focus contrasted against the more sector-wise approach often applied by the government agencies. The sector-specific planning can also be seen as a result of the competition focus of the 1963 transport policy. Competition opens for coordination through markets. There is, however, not always coordination over organizational boundaries, but perhaps rather between separate organizations. Now the government seems to have been aiming for something more demanding and further developed.
The key solution to the perceived need for a reorientation of transport policy and a broadening of the policy scope was the stronger focus on welfare economics, and cost-benefit analysis as its main operational characteristic. The change in focus was, however, also combined with a partly new view of the financial regulation of the transport policy area. The calculations presented by the 1972 Transport Policy Committee showing a net fiscal surplus when comparing road transportation system costs and tax revenues were confirmed by the government. The former per transport mode cost responsibility proposed abandoned both for roads and railroads in favor of a future free determination process of the financing measures based on “general political assessments” (pp. 33-34). This move can of course also be seen as a step towards a view in line more with classical public finance theory, while the former idea could be seen as connected to Knut Wicksell’s interest principle for taxation.

Social marginal cost-based pricing was seen as the preferred principle for future decisions on the prices and taxes in the area, primarily when it came to the use of the existing network. At the same time the difficulties in applying these principles were reflected on. And once again the fiscal needs of the government were emphasized.

Most of the external organizations that had commented on the Transport Policy Committee’s reports were, according to the government’s proposal, positive towards the re-orientation of the policies. However, there were critical voices surrounding the implementation of the marginal cost principle. Some of the major road freight corporations and both the Aviation Administration (Luftfartssverket) and the Road Administration questioned whether the marginal cost calculations should include costs based only on the present network, and suggested that new projects and sections of the road network should be included. These organizations also commented on the uncertainties surrounding the calculations of social marginal costs. These comments came rather close to the analysis and conclusions on these matters provided by the 1953 Transport Policy Committee, which was also mentioned by some of the organizations as a sound basis for the government’s future deliberations on the subject, rather than the 1972 Committee’s view.

Parliament’s Standing Committee on Transport largely endorsed the government’s proposal (TU 1978/79:18). The major supporting parties of the minority Government (at the time only 10 percent of the votes in Parliament) were thus positive. The right-wing liberals (Moderata samlingspartiet) were the only proponents of a prolonged focus on competition between transport modes as the guiding principle for the transport policy. Free competition as the basis for transport policy was supported in a proposal from this party in Parliament (M 1978/79:1398). This proposal was, however, rejected by the majority and was not included in the final decision.

Similar to the situation in 1963, it seems reasonable to interpret the development of the government’s transport policy during the 1970s as a stepwise process, wherein the formal policy decisions seem to be confirming a policy that was developed through the interaction between the principles set in policy decisions and the accumulated practical experience as the policies were implemented. Formal policy formulation in the area thus seems rather slow, while the development in the road and railroad sectors was faster and pushed the government to act on several occasions. The government seems to be reacting rather than outlining new policies ahead of the general opinion.

By the beginning of the 1970s, the accumulated experience during the 1960s had led to strong criticism against the cost responsibility principle and the competition framework of the 1963 (and 1944) transport policy. Rapidly growing road transport, difficulties connected to coping politically with the necessary reductions of the railroad system, and growing concerns in general towards the external effects of road traffic were factors pushing the political system to act. Combined with a growing concern towards central planning, and with a
demand for decentralization in many sectors of the Swedish society, these factors paved the way for a move to a new strategy and focus of the government’s ownership role in relation to transport policy and transport infrastructure.

Ultimately, the 1979 transport policy decision did not have enough stability and influence to change the situation as intended. It seems more relevant to locate a turn in the practical policies to a situation a decade later. The government had initiated renewed work for analyzing the transport policies by the mid-1980s. The background, according to the government, was that the new principles that were decided in 1979 had to be implemented throughout the transport infrastructure sector, which had so far not been done. In the railroad sector further decisions had been taken in 1985 to relieve the Railroad Administration from capital costs and depreciations for the network in order to improve the operating result. This decision also called for a follow-up in order to be integrated in the transport policy framework. Once again the development in relation to railroads called for action.

14 The 1988 decision – a step back to 1963?

A number of reports were presented by the Ministry of Communication during the 1980s as a result of preparations for a coming transport policy decision. It is interesting to see that the preparations for this decision were made internally in the Ministry in contrast to the preparations in the 1940s-1970s, which were carried out by government committees working more freely and externally in relation to the Ministry. One of the reports prepared during the 1980s (published in 1987 before the decision) concerned the cost responsibility of the transport sector (DsK 1987:4). The report discussed how the 1979 decision and its view on how the social marginal cost principle should be interpreted and how to finance the “financing deficit” that is often an effect of marginal cost pricing policies, especially for railroads.

The report concluded (p. 18) that there had never been any clear-cut discussion presented by the government on these issues, but only rather vague arguments indicating that the government in general would have to finance the deficit with tax income. The report, however, argued that this was not based on a sufficient analysis. It could, according to the report, be argued that an efficient allocation of resources in the economy and specifically in the transport sector would necessitate the use of a social marginal cost principle for the pricing of the use of the transport infrastructure and the decision on a subsector responsibility for covering total costs through fixed fees or taxes.

The major advantage with charging the subsectors with the responsibility for the full costs would, according to the report (p. 42), be that this would transmit information about the full cost of the transport mode to the users. Without this information there would be an obvious risk of high demand for transport services, often resulting in congestion and low quality. Here, echoed in the debate, were the arguments raised by Coase (1946, 1947) in two articles that argued for a model with full cost coverage, and the need for an organizational or institutional focus on systems like transport infrastructure in order to make the systems efficient.

In this report the connection between the financing principles and the organizational or internal efficiency of the separate transport modes was also discussed. It was argued that a cost responsibility principle would give stronger incentives for efficiency than if fixed costs were covered by general tax income. The report finally proposed something like a mix of the 1963 and 1979 transport policy decisions in these respects. Social short-term marginal costs as a basis for prices for the use of transport infrastructure should be used in combination with a modal cost responsibility principle, allowing for customers to choose the most efficient transport mode in every situation.
The conclusions of the 1987 Ministry report were countered by a report (TFB 1987:10) by the government’s Transport Research Board (TFB) (Transportforskningsberedningen) and carried out by some of the authors of the 1974 book on welfare economics as a basis for transport policy. The report countered more or less all the proposals put forward by the ministerial report and argued for the full implementation of the 1979 transport policy decision. According to the TFB report, the cost responsibility principle was without value for reaching efficiency in the transport sector.

There were, according to the TFB report, no valid arguments speaking in favor of the possibility to set-up a meaningful mode-specific cost responsibility. One of the reasons given was that competition is not at hand between transport modes, but perhaps more accurately between different geographical transport relations on the transport market. Finally, the organizational and incentive arguments were seen to be possibly less important than argued for in the ministerial report. Thus, at this stage there were clearly opposing views with regard to which should be the accurate basis for the management and financing principles in the transport infrastructure sector.

The government positioned itself somewhere in between these conflicting views on transport policy in its proposal to Parliament in 1988 (1987/88:50). The government concluded that the principles of the 1979 decision had not been fully implemented in the sector. The different market conditions in the subsectors where the transport modes operate had, according to the government, been more important over time than the overriding political principles that were concluded in the transport policy decisions. The decision to have the cost responsibility of the transport sector analyzed in the ministerial report was also possibly a sign that the new policy introduced by the 1979 decision was not fully supported by the (at the time Social Democratic) government.

As a basis for the government’s proposal to redefine the policies again after such a short time period, the government included an entire internal ministerial memorandum summing up the comments from a large number of organizations in relation to the report (DsK 1987:4). This memo (Supplement 1.3 to Bill 1987/88:50) shows that many—in academia, government agencies and the private sector—had not fully endorsed the 1979 policies.

At this stage, however, the government agencies in the transport sector supported the new phrasing of the cost responsibility principle. There was thus support for a separate cost responsibility for every single transport mode. One argument in favor of a reformulation back to the 1963-style policies was that the government had failed, all through the 1980s, to handle the financing of the financing deficit of the transport infrastructure in a coherent way. As the Swedish Enterprise Union (Industriförbundet) put it the 1979 transport policy decision had “left open a too wide space for short-sightedness and decisions that often distort competition and with effects that reduces efficiency” (p. 115).

Some of the comments also took note of the government’s tendency to overtax road transport as a stable source of general funding. The Swedish Road Association argued that the over-taxation in 1987/88 was something like SEK 9 billion, and had been growing over the years. A cost responsibility principle should in this perspective work as a safeguard against high taxation.

There were also critical voices reflected in the memo. The critique from the researchers published in the TFB report was cited at length, as were other transport researchers’ views. They favored a social marginal cost view and rejected the proposals in the ministerial report.

As the Minister discussed the cost responsibility principle in the transport policy area the conclusions and proposals were very close to the proposals presented in the 1987 ministerial report. A social marginal cost principle was thus proposed for short-term costs, while
a (full) cost responsibility principle was proposed to cover all fixed costs, which should be borne on a decentralized level in the system. Competition between the transport modes and the importance of the free choice of transport customers and users were further emphasized in the proposal. Here, the government took a step back from the more vaguely formulated principles of 1979, where the basic principle was that the financing gap, following the introduction of marginal cost-based prices, should be covered by government financing rather than by subsector cost responsibility. The proposal was endorsed by Parliament, and thus the policies had been changed, again.

15 Ten years later – and back to 1979

While marking a turn back to the time before 1979, the 1988 decision seems to have had as limited impact on the practical policies actually pursued as most of the other decisions since the 1940s in the sector. Part of the 1988 decision was to separate the railroad infrastructure from the Railroad Administration. The infrastructure part of the former administration formed a new National Rail Administration, a government agency largely financed with government appropriations. The new agency was established in order to focus the remaining Railroad Agency’s business on transport services, opening for a level playing field between rail and road. At the same time the decision led to a drastically increased government funding of the railroad system, partly in breach of the principle of cost responsibility that stated that the users, to the extent possible, should cover the costs of each transport mode. This was a sign of the difficulties of adhering to the 1988 decision.

Following the financial and fiscal crisis in Sweden in the early and mid-1990s, Sweden’s entry into the European Union in 1995 and the increased political focus on sustainability and environmental policies, the government initiated another review of transport policy by the mid-1990s. By this time a new government had been elected and once again Social Democrats were in power, but supported by other parties with environmental policies on their agendas.

Once again a government committee was launched. This time a committee with a number of MoPs as members was set-up focusing on a general reformulation of transport policy. The committee proposed a widened goal for transport policy to explicitly include areas such as regional policy, sustainability and traffic safety. This marked a shift to a more politicized agenda for transport policy. The report (SOU 1997:35) from the 1996 Transport Policy Committee was also more openly political than earlier reports in this policy area. Transport policy was described as a clearly political area, where the focus should be the achievement of political goals rather than viewing transport policy and transport systems as functional systems.

With regard to the main focus of this study—the ownership and financing issues—the starting point for the Committee was a number of reports from the government’s agency for Public Management (Statskontoret), which had evaluated the implementation and effects of the 1988 transport policy decision. In one of its reports (1996:2), the agency concluded that the full cost responsibility according to the 1988 decision had not been achieved. The agency explained that this outcome was largely positive, since the implementation of the 1988 policies would have led to a less efficient situation, seen from a welfare economics angle. This is of course rather surprising to come from a government agency responsible for good management practices in the government sector.

The Committee reflected on the issue of internal and external efficiency of the transport system with a view that a cost responsibility principle would give a good framework for internal efficiency, more so than a welfare economics framework with tax funding of
fixed costs. A number of reasons where, however, presented as support for rejecting the cost responsibility principle:

- it was difficult to treat all transport modes equally;
- there was a lack of payment systems and payment technology necessary for the implementation of a cost responsibility principle;
- a full cost responsibility means that a number of welfare economically profitable projects will not be constructed;
- regional policy calls for a welfare economics framework; and
- the experience was that railroads cannot be managed based on a cost responsibility principle.

In a few sections in its final report (p. 138 ff) the Committee concluded that the former principles (1963 and 1988) were deficient as guiding principles. The new policy proposed that short-term social marginal costs should (once again) be the basis for fees and taxes. Financing of fixed costs or the remaining financing gap should (normatively expressed) be covered by general tax funding. At the same time, some additional funding from users should be possible in specific cases to allow for efficiency gains in addition to what cost-benefit analysis shows. Furthermore, and this is rather peculiar (but common in many countries), aviation and maritime services and infrastructure should be left outside the principles, since these system worked within a business economics framework.

A number of reservations were added to the report. The opposition parties to the liberal right were all unanimously critical to the shift towards a too strong focus on politics and welfare economics. They favored a more user-oriented transport policy, and suggested that both the rail and road administrations should be transformed to a public utility with a separate balance sheet and a profit and loss account. Their views were supported by the representatives from the Swedish Enterprise Union. Concurrently, representatives of the left-wing and environmental parties criticized the Committee majority for taking too little action against the environmental effects of traffic. Railroads should be even more favored, compared to the previous framework, in their view.

In its proposal to Parliament in 1998 (1997/98:56) the government presented a view similar to that of the 1996 Transport Policy Committee. However, as in earlier decisions that have been reflected upon in this paper, the government often tends to be more pragmatic than the Committees working on the questions. The government thus, in its basic transport policy principles (p. 36 ff), clearly outlined that even though transport policy was one policy area among others, and that transport issues mainly are to be treated in relation to the political goals and not primarily as a functional system as such, it must be based on the principles of decentralization of demand and user choices. It is through the active choices of users and customers of transport actors that efficiency and development is achieved. Competition between transport modes should not be seen as a goal for transport policy as such; at the same time, it was seen as important to foster competition as a means of achieving efficiency.

An example of this view was given by the government with reference to the deregulation of the transport sector that had been part of government policy since the 1988 transport policy decision, irrespective of which political parties had been in office.

With regard to the view on the cost responsibility of the transport sector, the government was clear that the basic principle should be that prices and taxes should reflect the social short-term marginal costs of the use of the transport infrastructure, with a focus on internalization of external effects. A further effort should be carried out to calculate and implement prices based on these principles, even if practical and technological difficulties are examples of reasons for being pragmatic in the implementation of the principle.
One of the main reasons for the 1988 principles, with a more marked full cost responsibility, was stated by the government to have been to avoid overly large investments in transport infrastructure. This is interesting since this argument was not raised publicly in relation to the 1988 decision. In line with the 1996 Committee, the government concluded that the principle had been difficult to implement and that competition between the transport modes had never been fully developed. Since the government also held the view that cost responsibility implemented on a transport mode level would be economically inefficient, a further argument against the 1988 decision was given strong importance.

The 1988 transport policy decision’s focus on cost responsibility with full cost coverage was therefore proposed to be changed again, back to something more like the 1979 decision. Since the government was once again rather pragmatic when formulating the new policies it was not fully clear how the new policy should be implemented. There were still openings for different views on the implementation of the new policy. The proposal was endorsed by Parliament in 1998.

The decision in 1998 has been confirmed by later decisions on transport policy based on proposals from the government in 2006 (2005/2006:160), 2008 (2008/09:35) and 2012 (2012/13:25). Short-term social marginal costs as the basis for charging of fees and taxes has been the new cost responsibility principle of transport policy since the late 1990s, though combined with an implicit fiscal restraint that the sector should cover its cost, which is upheld primarily through high taxes on fuel for road transport. With all of the additional
goals the goal structure has become multi-dimensional. It could perhaps be argued that it is possible to read almost anything into the goal structure that is suitable for the moment, something that makes the system difficult to manage from an efficiency point of view.

In parallel to the development of the welfare economics basis for transport policy and transport infrastructure policies, which is largely based on the idea of government financing and marginal cost principles, there have been a number of initiatives to introduce additional or competing financing principles. Examples are two government committees during the 1990s, where toll road financing and other fee structures were proposed (SOU 1990:86, 1994:142 and 1995:82).

The 1990 committee reiterated the arguments originally raised by the 1944 Transport Committee, earmarking a separate road fund and the establishment of a state-owned corporation for roads. All measures aimed at increasing the operational efficiency of the road and railroad sectors. The latter two reports focused more on road charging to pay for the major envisaged investment programs in Stockholm and Gothenburg; therefore, becoming forerunners of the current congestion charging systems in these two cities.

Some projects, with combinations of government and private sector financing, have also been realized: Arlandabanan (railroad between Stockholm and the major airport Arlanda), the Öresund bridge (between Sweden’s third-largest city Malmö and Copenhagen), and Svinesundsbron a bridge between Sweden and Norway. The proposals from the above-mentioned committees, however, have been left more or less without action, as was the case with the proposals put forward in 1962 from the Road Toll Committee. The most obvious results of the continued work with these issues have perhaps instead been the introduction of congestion charging in Stockholm and Gothenburg.

Part of the 2008 decision of the transport infrastructure policy was also the opening for co-financing between the government and local governments and/or the private sector. A large number of projects with such combined financing were also proposed from the Road and Railroad Administration as part of the investment plan for 2010-2021. Some of these projects have been combined with different toll financing proposals as a part of the financing structure. It is still unclear how these proposals will be implemented.

A major focus of the government has been to implement these principles throughout the transport system, covering all different transport modes. This horizontal perspective has been further strengthened by the merger of the rail and road administrations in 2010, which formed the new Swedish Transport Administration.
PART 4 – CONCLUSIONS

16 Conclusions seen from the co-evolutionary perspective

16.1 Development steps in transport infrastructure in Sweden

Over the time period studied in this paper, technology, economics and political factors to a large extent explain how the government’s role in transport infrastructure has been formed. The analysis based on co-evolution also gives further understanding as to how the balance between private and public sector provisions of transport infrastructure has developed over time.

In some periods, the government has been more liberal in its stance towards the development of transport infrastructure, opening for private sector involvement, while in other periods the government has intervened through different measures. The view advocated in this paper is that the government was rather reluctant to become more involved than was necessary in the transport infrastructure during the 20th century. As the nationalization finally was decided the government seems to have taken the role of a business-oriented owner with competition as one of its overriding goals, more than a welfare economics inspired activist.

Over the last 20-30 years, a more politicized agenda has been developed for roads and railroads, incorporating wider goals than those only directly connected to the functioning of the systems. This development has been combined with the successive use of social cost-benefit analysis as a tool for prioritization of investment projects and short-term social marginal cost principles for pricing and taxation.

As a starting point for the concluding discussion on the development, Figure 7 below summarizes some of the important aspects of the development of roads and railroads in Sweden from the mid-1800s up to the 2010s. The main focus of this paper is the development since the 1930s.

Similar chronologies of the development of industrial epochs have been presented in a number of cases. Tunzelman (2003) presents three industrial eras (1750-1815, 1870-1914, and 1973 onwards) as distinct development phases. These are connected to the following governance modes—Markets, Hierarchies and Networks—which also mark the size of the organizations driving development, from small to major and in the present era a mix between multinationals and locals, often intertwined in complicated networks. Schön (2010) has presented a similar framework with a number of periods as a structure for the historical development.

The figure gives a broad orientation to some of the aspects affecting the development sorted into the three categories in the co-evolutionary perspective. The balance between market orientation and government intervention is also briefly sketched in the figure. Over time a fairly liberal policy stance seems to have been the dominant view, though with varying regulations and different views on government ownership.
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<th>Role of</th>
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<tr>
<td>Technology</td>
<td>Technology push from railroads</td>
<td>Technology push from cars, buses and trucks</td>
<td>Road transport continues to grow</td>
<td>New technology pushes development:</td>
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<td>Sustainability adaptation</td>
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<td>Economics</td>
<td>Rather limited government resources, focus on main railroad lines</td>
<td>Liberal stance with growing government involvement</td>
<td>Regulated economy</td>
<td>Deregulation, focus on markets and networks</td>
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<td>Welfare economics calculation</td>
<td>Stronger competition</td>
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<td>Politics</td>
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<td>National systems for nation-wide services</td>
<td>Redistributive focus</td>
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<td>Intervention/regulation</td>
<td>Openness for market solutions/liberal stance</td>
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<td>Openness for private and local initiatives</td>
<td>Non-interventionist Growing government involvement in specific areas</td>
<td>Strong government involvement</td>
<td>Still major government involvement in transport infrastructure but some market openings</td>
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<td>Only main railroad lines in the hands of government</td>
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Figure 7

Railroads and roads from 1840-2010, influence from technology, economics, politics, and the view on markets/government intervention in four historical periods

16.2 Nationalization

The development leading to the decisions in the 1930-40s to nationalize railroads and roads was a process where technology, economics and political/cultural aspects interacted. The historical links from the mid-19th century had an impact on the development in the 1930s, as discussed in the section above. Figure 1 is repeated to help the reader connect the following discussion back to the perspective.
Technology push opening for entrepreneurs and calling for coordination

Technology pushed the development in two distinct phases: firstly, from 1850-1900 with regard to railroads; and secondly, from the 1920s with regard to roads. The government responded in both cases by interacting with the private sector. For railroads measures were taken to facilitate railroad construction, while for roads measures were taken to strengthen the local authorities responsible for road infrastructure, ultimately enabling them to meet the demands from a growing road transport sector. To accommodate the changes that followed new institutions and organizations were successively formed when the new technologies were introduced.

It is interesting to discuss the degree of and importance of agency influence in the introduction of the new technologies. In Sweden, there were a number of strong proponents or entrepreneurs who at specific times were influential for the introduction of railroads. According to Kaijser (1994), two important actors were evident in mid-19th century railroad policies: von Rosen and Akrell. Von Rosen was given the first concession to build the first private railroad system in Sweden. Akrell was commissioned by the government to present proposals for a national railroad system, which were later the basis for the construction of the major rail lines by the government.

Blomkvist (2001) also brought an agency perspective to the forefront when it comes to the development of road systems in Sweden. Professional road technicians are pointed out as an important and influential group in the development of roads. Section four above discusses the support from these professional groups in the process before the decision on nationalization of rural roads.

Here, both North’s (1990) and Rao and Sings’ (2001) emphasis on active agents or entrepreneurs in the development seems to be relevant as a theoretical parallel. It seems relevant to include their perspectives in the understanding of the development. Technology is not only a supply side effect enabling new demand, but it can also be used by agents with specific purposes, which has been done in Sweden and in many other countries.

Tunzelman (2003) connects technological development with the evolution of forms of governance in organizations. A number of “matching mechanisms” according to Tunzelman connect technology and governance. In parallel with this reasoning the technological development during the 1920-30s might have called for a new connection between technology and organization/governance. Therefore, stronger coordination might have been necessary in order to spread new technology and improve the technical standard at large.

Tunzelman points to possible governance failures if the matching mechanisms are not there to support technology utilization. The lack of coordination in the road sector, and the slow introduction of new technology that was argued to be a result of the fragmented
management structure until nationalization, could be seen as a sign of such a government failure. At the same time, the coordination measures in railroads were less discussed in terms of necessary technological improvements. The possible cost reductions in the general operations of the railroad organizations were instead pointed out more clearly in this sector.

**Lacking financing and high transaction costs motivated government intervention**

Financial aspects and wider welfare economics effects of transport infrastructure systems have always been part of the discussion around these systems. For railroads the financing of the initial investments was difficult to arrange on the financial market. There was a need for the government to take on substantial parts of the construction costs and risks to make the introduction possible. Based on substantial support measures to private and local actors, around 70 percent of the system was finally constructed and operated by private railroad corporations. Thus, a large proportion of the railroads depended on government financial support; however, at the same time they were part of the business sector, with customers paying for the majority of the total costs of the system through direct user fees.

Rural public roads went through a development wherein financial responsibility was subsequently transferred from single property owners to a local government level organized in the road districts with local income tax financing. Rural roads were thus part of the public sector, though organized on a local level. Furthermore, financing of roads was one of the most discussed issues in government and Parliament. Financing issues finally also played an important role in the decisions to nationalize rural roads.

For both railroads and roads there was a strong drive for rationalization and cost reduction as early as the 19th century. Arguments based on business economics, rather than on welfare economics, were among the strongest in favor of nationalization. Arguments based on the existence of natural monopolies or alternatively on welfare economics were not too important, neither for railroads nor for roads. As remarked earlier, discussions inspired by these theories seem to have been more openly discussed outside the public documents and committees (Alfvors, 1977).

The transaction cost perspective, as discussed by Williamson has some bearing on the understanding of the development. On the one hand, the vertical integration of the railroad system might be seen as a response to the need for control and coordination in the railroad sector seen as necessary at the time, and presumably seen as difficult to arrange on markets. On the other hand, the lack of any alternative to public sector organization as the systems were nationalized might be seen as an indication of the difficulties to negotiate agreements in the private sector or as a sign of the existence of too high risks for market-driven organizations to be able to compete.

The prevailing view that roads and railroads were natural parts of the public sector, echoing the presence of something like an ethical value (Williamson’s “probity”) connected to the systems, also spoke in favor of public sector organizations. A government takeover, not a solution in the private sector, was also part of the road lobbyists’ agenda, according to Blomkvist (2001).

**Politics slowly reacting and pragmatic**

The political system played an important but at length rather defensive role, taking active action only when absolutely necessary. Through the 19th century and early 20th century, politics seemed to have been focused on finding ways of balancing national goals of fast railroad construction of main national lines with openness for private sector actors to construct and manage other railroads. For roads there was a reluctance to alter the balance between
local and central levels in the public sector, which outweighed the need for a more rational road management organization for a long time.

Only in pressing situations, such as when other political agendas (i.e., equalization of taxes or the demands from wartime planning) were strong enough, was political action finally taken. The rather slow response to the growth of road transport during the 1920-30s and the reluctance to intervene in the railroad sector are two examples of this. There is no obvious sign in the public documents that there were any strong interests favoring a nationalization of the assets of private railroads or local road districts as such. Had there been another way of solving the economic and partly political problems these would probably have been welcomed.

Winston (2010) presents a brief historical overview of the transport infrastructure systems in the US. Winston reflects on the occasional situations when the US government on federal, state and local levels, for example with regard to airport nationalizations in the 1920s, made decisions that were not in line with the overriding fairly liberal and non-interventionist policies of the administration. These unexpected measures might be seen as a response to the extremely difficult financial situation for the airports rather than a genuine shift in policy orientation. This can be seen as a parallel to the Swedish experience.

In relation to the literature quoted in section two, the political system seems to have been open to allow strong single agents to play an important role in the development of primarily the rail system, which resembles the importance of single actors raised by North (1990) and Rao and Sing (2001). The political system was active in shaping the necessary financial stability through credits and concessions to enable private actors to take the risks connected to building large parts of the railroad system. The government was also active in managing the introduction of new technologies both for railroads and roads through its agencies in both areas, coming close to Kemp, Rip and Scot’s (2001) strategies of path construction for transition between technologies.

The balance between private and public sector organization

The question of whether the private or the public sector should be responsible for railroads and roads was most intensely debated in the railroad sector. There was an example in the railroad sector from both a business structure orientation with many private corporations and from a business economics orientation with close relationships to end users in the organizations. Therefore there was a discussion in relation to the nationalization on the pros and cons of a government takeover in terms of what type of owner would be the most appropriate from an efficiency point of view.

For roads there was no experience from private sector organizations in Sweden. Compared to railroads one of the differences was that the focus in the road sector was only on infrastructure, since transport services were carried out by private sector actors. Discussions surrounding the organization of the road transport sector were primarily focused on the different transport modes within the sector. The Road and Railroad Traffic Conference in 1927 was one example, where the government’s regulations on bus transport was a hot topic for discussion, specifically should regulations on transport services such as bus transport be kept or should a freer market be allowed?

The usefulness of preserving competition for the development of efficiency, for the introduction of new technology, and as the preferred organizational model for businesses in a market economy, were not strong enough as counter-arguments. Nationalization was seen as the modern way of organizing transport infrastructure.
16.3 Policy formation

The government had decided to take over the ownership of the railroad system in the last months before the Second World War and incorporated the public rural roads in its operations during the war. When the war was coming to an end there was a need for the government to develop a view on the ownership role and transport policy for the future. There were a lot of challenges to be considered and met, and there was a need for at least three different basic policy areas to be developed:

- coherent transport policy;
- financing policy; and
- strategic plan for the new construction of the networks (mainly for roads).

A large number of government committees were set-up to work on these different issues during the 1940s and 1950s, and financing principles and physical planning issues seem to have received major political interest. It was not until 1963 that the government finally settled for a coherent proposal to Parliament, based on the 1953 Transport Policy Committee's work. In many ways this is surprising. One of the major areas in the government's budget and in the balance sheet was managed without a clear policy with regard to strategic development and other important aspects of the ownership.

Investment needs and political reality

The 1944 Transport Committee handled the questions around the development of a transport policy framework. Its main contribution to the transport policy area in the coming decades was perhaps the strong focus on efficiency in the sector and the sustained principle that each transport mode should cover its own costs. The cost responsibility principle and the proposals for a closed budget principle for road financing were to remain one of the strongest parts of the transport policy throughout the coming decades.

Market-oriented models were also applied to the view on the future operation of the different transport modes. Government control and financing of the transport infrastructure was, however, not discussed by the Committee. The Committee believed that the important thing for the future was to set-up a good organization for the management of the operations and for the strategic planning issues to be carried out efficiently.

The lack of an explicit response from the government to the Committee's proposals might be interpreted in the light of the ongoing discussion of the time in the general political debate. The postwar period in Sweden was marked by a concern over economic development in general. There seemed to be an obvious risk that the macroeconomic balance would be put at risk, with a strong domestic demand for investments and consumption while export markets were unpredictable in the time to come. The experiences from the 1920s were fresh in the minds of many decision-makers, and there was a fear of a repetition of the financial crisis of the late 1920s and early 1930s would the development not be controlled.

In addition, there was a turn into a more interventionist policy stance as a Social Democratic government was formed in 1945. In the Post-War Program and the Planning Commission, headed by (at the time foreign trade minister) Gunnar Myrdal, there was focus on regulation and control over the economy in a much more powerful way than earlier. The market economy was seen to be lacking the ability to handle the strategic restructuring of the economy that was seen as necessary, and there was a clear role for the government in most policy areas. This has been described by, for example, Schön (2010) and Appelqvist (2000).
The more active stance in politics was kept up until the 1948 elections when Social Democrats lost a number of seats in Parliament in favor of mainly Liberals (Folkpartiet), headed by another prominent scholar from the Stockholm School of Economics, Bertil Ohlin. Ohlin had fiercely opposed the more active government policies, including nationalization of further industries represented by, for instance, Myrdal’s Planning Committee, which also had major parts of the business life in Sweden. As Myrdal had to resign in 1947, following criticism in relation to his Soviet Union-friendly trade policy proposals, and the elections were lost, the policies of the government shifted to a more consensus-oriented mode. It might, however, be understandable that a market-friendly transport policy report in the midst of these strong political disputes was not to be taken into constructive deliberation by the government.

Both the Railroad Administration and the Road Administration had to plan for the growing road transport and the changing railroad transport, no matter the lacking strategy for transport policy. A major question was how to accommodate the investment needs in the system. The Road Administration put together internal plans for investments in the road system. In the absence of a clear transport policy, mainly an area where the Ministry of Communication could be expected to act, the Ministry of Finance was more active and initiated the Long Term Economic Committees as a tool for long-term planning. The focus was put primarily on investment control and management and less on accommodating the perceived needs in the transport sector.

Lacking a developed transport policy, macroeconomic concerns worked strongly in favor of a cautious policy. The transport sector was, however, also lacking a strategic road construction plan and a sustainable model for financing that plan, which was pointed out by the 1950 Long Term Committee and by Parliament. This had to be solved. The solution was to set-up two new committees: one looking into the financing of road investments, the other looking into the transport policy in general. An overview of the core elements of the transport policy of the time is presented in Figure 8 above.

Figure 8
Transport infrastructure planning and management 1945-1963

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Methods for financing

The proposals by the 1951 Road Vehicle Tax Committee that fuel and vehicle taxes should be raised in order to meet the projected investment needs in the coming years was an attempt to settle for a more sustainable model for financing of the road system in the long term. There was also an idea to rebalance the taxes in order to let heavier vehicles pay for a larger part of their costs.

Just as important from a policy perspective was the fact that the Committee took many of its basic assumptions from the 1944 Transport Committee's work. The cost responsibility principle was reflected in the terms of reference from the government, but in many respects the 1951 Committee drew on the discussions in the 1944 Transport Committee’s report. By doing so the 1944 Committee’s work was given official backing as representing the official policy in the area.

With regard to alternative financing measures the Committee also presented an analysis of a loan-based financing system, which was, however, not presented as a final proposal by the Committee. Financing through taxes and government appropriations remained the model.

Until the Long Term Road Plan that was under way in the Road Delegation’s work was presented, the macroeconomic analysis, with its cautions towards expansion, was once again reiterated by the 1955 Economic Long Term Committee. In the Long Term Committee’s report the perspective was the entire road and motor vehicle system as one comprehensive system. The Economic Long Term Committee was concerned that strong growth of private motor vehicle ownership would lead to crowding out of other important consumption and investment needs. The Committee also introduced the idea that road taxes could reduce road transport volumes and could be used as a balancing measure to meet heavy transport growth. This is probably the first sign of proposals for the use of taxes as a traffic management tool in the public policies after the Second World War.

The Road Delegation’s report was the first comprehensive road construction plan following the war that had been compiled outside of the Road Administration. At the same time, the Delegation’s work was strongly influenced by the economic framework set by the decisions of the 1950s. Any new costs for road construction had to be covered by the sector itself.

Thus, the Delegation’s work was marked by a need to reduce the plans for new construction to the most necessary projects. A method also needed to be developed whereby the basis of road planning dealt with the already existing road system. The policy to connect towns with new roads, rather than to construct completely new roads, might thus be seen as an effect of the need for a rather modest plan. Anything else would have led to drastic needs for new tax funding to be raised from the motor vehicle community itself. The cost responsibility principle was effective as an economic framework limiting the growth of the sector.

The consensus about the importance of the cost responsibility principle had the effect that the resources available for road construction were less than satisfactory for many interest groups, for example the road organizations. The perceived need for additional resources inspired the opposition in Parliament to propose that additional funding should be made available through an opening for toll financing. The proposals presented by the 1960 Committee on these issues for an opening for toll financed roads were, however, not taken into deeper consideration by the government.

The 1963 transport policy decision, based on the long-lasting work of the 1953 Transport Policy Committee, was seen as the hallmark of the postwar transport policy in
Sweden. This picture is partly changed when seen in a longer-term perspective. The basic principles for transport policy and for the development of railroads and roads were more or less set during the 1940s. The 1963 decision did perhaps confirm the policies that had prevailed for nearly 20 years.

The new elements in the Committee’s work were mainly a more far-reaching program for the dismantling of remaining wartime and pre-war regulations on road and railroad transport than earlier proposed. This was motivated by the need to allow for competition and an even playing field between the transport modes. Another novelty had been introduced in the terms of reference for the Committee by government: a minimum transport standard in all parts of the country should be safeguarded by the transport system. This marks a focus on a more developed goal description than earlier with more focus on the interrelation of the transport system with other policy areas. In the proposal to Parliament additional goals were added regarding both safety and technological development.

The discussion on the use of welfare economics principles was also more present both in the Committee report and in the government proposal. The theoretical soundness of marginal cost-based pricing was discussed by the Committee for the use in the existing networks, while full cost coverage should be the principle for new construction. The latter was seen as a consequence primarily of the cost responsibility principle and not (fully) in line with a welfare economics perspective. Social cost-benefit analysis was also said to be used when prioritizing between different investment projects, which should also be carried out in a cross-mode perspective and with a close coordination with regional and local interests.

1944 transport policy framework

Transport system

General economic development

1963 transport policy framework

Transport system

General economic development

**Figure 9**

*1944 and 1963 transport policy frameworks*

The tendency for a shift in focus of the transport policy is illustrated in Figure 9 above, with the 1944 Committee expressing the transport system as the dependent variable, answering to the needs of the business sector and other users as a “support system” (SOU 1947:85, p. 43) for business life, and thus for general economic development. Other goals for the transport policy were also discussed as a tool for structural economic policy but were not analyzed deeper. In the 1953 Committee and in the government’s 1963 proposal to Parliament, the transport system was seen as interacting with other policy areas more so than in the 1944 analysis. Thus, it was transformed from only being the dependent system in relation to the general economic development to having a role as being interrelated with the general
economic development in an interactive process. The former views seems to be more in line with general business economics thinking in most sectors, while the latter gives room for a broader perspective and also makes the use of welfare economics-inspired analysis more logical.

Roads and railroads were interrelated as the growth of road transport allowed for the reduction of rail transport; both as there was an alternative but also as the rail system was outcompeted in many transport relations. The railroad system in this respect resembles the role of a “reverse salient” (Hughes, 1987) in the transport system, representing the part of the system that was lagging from a technological point of view and which demanded much financial support and focus from politicians. While the road system had positive momentum with strong growth and a number of supporting actors such as consumer and producers and the road organizations, the railroad system had a strong role for the transport system but had to be reduced and transformed, a process that brought widespread public criticism starting in the 1950s but growing in force in the decades to come (Sannerstedt, 1979).

At the same time, the development did not lead to a discussion on the organization of transport infrastructure other than in the public sector. There seems to have been a consensus in the political system, and also among many of the organizations in society commenting on the proposals from the Committees, that the nationalized system was more or less functioning well. The main question was how to provide the system with more financing. Proposals for deregulation and market opening were raised mainly when it came to the operations of the transport modes, not for the infrastructure as such.

If the government can be seen as having decided to nationalize the road and railroad systems based on rather pragmatic efficiency arguments, the formation of the ownership role after the Second World War might be seen as following this pragmatic line. The policy, based on tradition and the proposals from the 1944 Transport Committee, was based in a business economics framework focusing on efficiency and competition. Gradually a more clearly welfare economics-based view, with broader political bearing, was developed. Consequently, the government was strengthened in its conviction not to let the transport system’s costs increase too fast. At the same time, the government was reluctant to go into any more drastic restructuring or structural change. The ownership role remained reluctant and pragmatic during this period.

16.4 Politics, welfare economics and deregulation

Politics stronger

The development of transport infrastructure and transport policies since the 1963 decision has been marked by successively widening political goals and aspirations. This more ambitious political agenda has been reflected in the initially prevailing principles that focused on financial aspects and business economics. These latter policies have been closely related to the cost responsibility principle, where the full costs of the sector should be covered by the users, paying fees or taxes to cover all costs. The internal efficiency of the transport infrastructure organizations and systems as functional units are closely linked to this view.

The welfare economics-inspired methods and theories have become more dominant in parallel to the more politicized agenda. In this environment short-term social marginal cost pricing and the coverage of resulting financing deficits (mainly for railroads) by general tax income have been important aspects. The successively refined cost-benefit analysis methods and calculations of marginal social costs have been part of this view. There is more focus on external efficiency in this view than in the former view.
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The period from 1963-2010 can be seen as a continuous balance from the government of these two paradigms or policies, where the government’s policy was formally based on the cost responsibility principle from 1963-1979 and again from 1988-1998. The welfare economics paradigm was formally the basis of the government’s policy from 1979-1988 and again since 1998. At the same time something like a negative correlation seems to have existed between what has been decided by the government and how the actual policies have been carried out. In the periods when a business economics framework has been the stronger the policies have been developed in the direction of a widening of the political aspirations. In the other periods, where the political agenda and welfare economics have been set out as the primary objective and methods of use, business economics and financial aspects seem to have been strengthened in the actual policy formation. This might be seen either as a contradictory functioning of the policies in the area, or as a successful balancing of two important standpoints that are difficult to reconcile in practice. An alternative way of analyzing the situation is to see it as an example of successful decoupling of talk and action in the political sphere, as suggested by Brunsson (1989).

Demand for transport services have been influential

The initial contraction of the railroad system during the 1960s, which has been shifted to an increase of demand for railroad transport, was one of the influential factors in the development since the 1960s. The contraction of the railroad system developed into a major political problem, which motivated the government to act on a number of occasions to support the Railroad Administration, put a ban on further railroad closures, and from the 1980s to reorganize the railroads, separating transport and infrastructure and opening for competition. As the general view on railroads and public transportation has become more positive, and subsidies to both passengers and railroad infrastructure has increased, the core issue for the railroad system has shifted to the capacity shortages, where transport quality is perceived to be deteriorating.

The road system, which was expanded up to the late 1970s and 1980s, has the capacity to absorb increasing transport volumes better than the railroads. Capacity shortages have primarily been experienced in the major cities. For Stockholm and Gothenburg, the two largest cities, congestion charging has been recently introduced as a method to counter the capacity shortage and has reduced congestion. From a historical perspective, it is interesting to see that the discussion on the use of road charging for handling capacity shortage was already introduced in the 1950s. Further expansion of the road system seems to be called for in primarily the three major cities and for some sections of the national roads, even if there are a number of regions calling for further road investments in other parts of Sweden.

Capacity shortages, in combination with sustainability concerns, have also worked towards the demand for improved capacity management and introduction of new technology for more fuel-efficient vehicles. This development, often framed in terms of ITS systems, might indicate a growing influence for technology in future development. More efficient use of existing capacity is a good alternative to new construction and new investment.

An observation based on these trends is that the transport infrastructure system has also recently had the role of primarily responding to changes in the demand from transport customers, in line with the policy framing in the first decades following the nationalization. The more ambitious view, that roads and railroads also offer improved availability and growth, which has been part of the overriding policy during the later period, is perhaps something more for planning than for practical outcomes.
Public or private sector?

There have been almost no serious discussions on altering the government’s ownership over the national railroads and roads. Parts of the government agencies’ operations have been divested, or so far transferred, to publicly-owned corporations in order to focus the agencies’ business to planning and investment management.

The discussion on the need for incentives that foster efficiency and user focus in the operations of the agencies in general has been less marked in the public documents than in the first decades following the nationalization, with an exception in the reports presented before the 1988 policy decision, where these issues were the focus.

The initiatives during the two latest decades to initiate a discussion around alternative financing might be seen in the light of the balancing of the public sector and private sector responsibilities for roads and railroads, but also as part of the general financing discussion with its origin back in the 1950s. The proposals since the early 1990s, to introduce general tolling or other financing measures as road charges based on distance, have thus far been framed primarily as an alternative to tax financing with preserved government ownership. The projects that have been financed by fees have been exceptions, such as bridges, also mentioned in the discussion around these issues in the 1960s. The major exception is Arlandabanan, where a PPP solution has been used, though with major criticism in the media and political debate. Further PPP projects have also been more or less banned by the government in the latest proposals to Parliament.

Congestion charging in Stockholm and Gothenburg are so far the most concrete examples of user charging. These systems have been implemented in order to manage transport flows and capacity utilization more efficiently. In this way they could be seen as part of the efforts to improve efficiency through more explicit incentives for users to economize their use of transport infrastructure. At the same time, these are also examples of a preserved government structure for roads and railroads.

The government has also been active in reorganizing the agencies and changed the structure of the agencies a number of times in order to promote efficiency. Many of these changes have been done in order to meet demands from the EU for a separation of inspection and management roles, and in order to allow for competition. A number of changes have also been made to make the maintenance and construction phases in relation to the management of the infrastructure systems more efficient.

All in all it seems the government is continuing with its traditional role to not only preserve government ownership but to act like a good manager, a role that was initiated in the 1940s. In this regard the question of the organization of transport infrastructure in the government sector or in the private sector has basically been a non-issue. Some initiatives have been taken in Parliament and in some of the government committees to question this policy, but more far-reaching steps to change the government’s ownership have been taken.

The government as a contradictory and reluctant owner?

A conclusion from the discussion around the earlier periods since the nationalization is that the government has acted as a rather pragmatic and reluctant owner of transport infrastructure, primarily reacting to developments rather than taking initiative.

Perhaps it is truer also to describe the government as a contradictory owner during the last studied period rather than a generally reluctant owner. As the political agenda has widened and welfare economics has been prioritized, the balance towards business economics management strategies has become a question that needs more focus by the government as owner of the transport infrastructure. The introduction of user charges in the road system is one such example where different management principles are mixed.
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