SIKA Report

2009:4

Experiences from implementing the first EU railway package

Preface

During the past year, SIKA has broadened the perspective from transport policy at the national level to the transport policy produced within the framework of the European Community. An example of this is the report *Starting points for European transport policy after 2010* (SIKA report 2009:1). This report was forward-looking in the sense that it was mainly intended to indicate some key areas which future transport policy should attend to. This report adopts another approach by evaluating the implementation of the policy decided upon retrospectively. This type of follow-up is important since good transport policy ambitions can be thwarted by incorrect or non-existent implementation of the decisions made.

This report covers the implementation of the first railway package of 2001. The rail sector has traditionally been nationally oriented, which has hindered the development of international rail traffic. This is one reason why an integrated railway policy is needed at the European level.

A reference group consisting of Gunnar Alexandersson from the Association of Swedish Train Operating Companies, Anders Svensson from the Swedish Rail Administration and Åsa Tysklind from the Swedish Transport Agency have contributed valuable points of view during the project. However, SIKA is solely responsible for the analyses and conclusions in the report.

Within the framework of this project, SIKA has commissioned Staffan Hultén of the Stockholm School of Economics to submit documentation that has been of great value. His report has been published in full as SIKA PM 2009:5 (in Swedish).

Backa Fredrik Brandt has been SIKA's project manager.

Östersund, October 2009

Brita Saxton
Director-General

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1 Introduction

A well-functioning transport system is essential for positive development of the European internal market, which in turn is to generate welfare and prosperity for the citizens of the EU. Traditionally, the construction of the infrastructure has been a matter for the individual countries which have endeavoured to optimise the system within the boundaries of the particular country. Considerations of military strategy have also led to cross-border links in the transport system being relatively few. Among the various modes of transport, this is most clear for rail traffic, not least due to the adoption of incompatible technical systems by different countries.

To increase the competitiveness of international rail traffic and thus the contribution of the railway to realising the internal market, the Commission has adopted a number of railway packages. The purpose of this report is to investigate which parts of the first railway package that the Member States have opted not to incorporate, or have incorporated in a way that is doubtful when viewed in relation to the intentions of the package. It is also intended to explain the choices made by Member States and the effects that these have had on the competitiveness of the railway and its ability to serve the internal market. This report does not deal with Directive 2001/16/EC on interoperability.

The report starts with a short review of the contents of the first and second railway packages and their intentions (Chapter 2). This is followed by an account of the development of rail traffic within the EU (Chapter 3). The following chapter sheds light on the main issue of implementation of the package in the Member States (Chapter 4), followed by the conclusions of the report.

2 The EU railway packages

For decades, rail traffic within the EU has been something of a problem child with continuously decreasing market shares. During a 30-year period from 1970 to 2000, the share of rail traffic of the total transport performance fell from 10 per cent to 6 per cent for passenger transport and from 20 per cent to 8 per cent for freight. In addition, government aid was required since an ever smaller share of the costs could be borne by the purchasers of transport.[1]

Despite the Commission undertaking a number of measures intended to enhance the popularity of the railway, the market shares of the railway continued to decrease. These measures included encouraging the Member States to organise their national rail undertakings as independent units operated on a commercial basis. Furthermore, government aid was only permitted in specially defined circumstances. At the end of the 1980s, it was evident, however, that these measures had not had the intended effect since the railways continued to decline and this was particularly evident in the case of international traffic. The Commission identified a number of causes for this:

- The national ties of the train operators meant that complicated negotiations were required for international traffic.
- Increased government aid together with increased costs for social undertakings that were not clearly defined. Many train operators showed large deficits on their balance sheet.
- Capacity limitations and poor quality of the infrastructure in particular for express trains and international freight traffic.
- Lack of technical harmonisation.

The above points made up the problem scenario that the Commission attempted to get to grips with through a change of policy in a more radical direction. The most important proposals in the new policy concerned a further strengthening of the commercial and financial independence of the train operators and separation of the functions for infrastructure and the provision of transport services. For the first time, the Commission clearly indicated a direction towards separation between infrastructure management and operators with the intention of increasing competition by allowing the entry of new operators.[2]

Railway policy did not make any deeper impression on this occasion either. In a white paper on the development of the railway, the Commission could note, for

[1] Nash, C. and Rivera-Trujillo, C. (2007): Rail reform in Europe: Issues and research needs, I: Rietveld, P. and Stough, R.R (red): *Institutions and sustainable transport; Regulatory reform in advanced economies*, Edward Elgar, Cheltenham.
[2] Nash, C. (2001): The impact of EU policies on private investment in railways, Association for European transport.

instance, that almost no new international freight traffic operators had entered the market.[3] This was the background to the introduction of the first railway package in 2001.

The railway package is part of a larger reshaping of the regulatory framework for rail traffic that the EU embarked upon with Directive 91/440/EEC. Put simply, the goal of these regulatory changes was to replace the previous state monopolies by effective competition (Table 2.1). A number of countries have been in the front of the process of deregulation initiated by the 1991 Directive, in particular Sweden and the U.K. All EU Member States have been criticised at some point for not complying with the spirit of the directives that have been adopted during this process of deregulation.[4]

[3] European Commission (1996): White paper; a strategy for revitalising the Community´s railways.
[4] SIKA (2009): EU:s första järnvägspaket; implementering och effekter, *SIKA PM 2009:5*, Östersund (The EU's first railway package: implementation and effects, in Swedish).

Table 2.1: Regulations and directives that affect the competitive situation of the railways

Regulation or Directive	*Year*	*Effects*
Directive 91/440/EEC	1991	Requirement for separate accounting for railway operators and infrastructure managers
Directive 95/18/EC and Directive 95/19/EC	1995	Licensing of railway undertakings and rules for allocating train paths and calculation of infrastructure fees
First railway package: - Directive 2001/12/EC amending Directive 91/440 - Directive 2001/13/EC amending Directive 95/18 - Directive 2001/14/EC repeals Directive 95/19 - Directive 2001/16/EC deals with interoperability of the conventional rail system.	2001	The first step towards the opening of the European rail market. Exposure to competition of international rail freight traffic within the EU.
Second railway package: - Directive 2004/51/EC amending Directive 91/440ff - Directive 2004/49/EC, European Railway Safety Directive amending Directive 95/18ff - Directive 2004/50/EC on interoperability both in the high-speed rail system and the conventional rail system - Regulation 881/2004 establishing a European railway agency ERA	2004	The second step towards the opening of the EU rail market. The whole freight transport market to be opened up to competition.
Third railway package: - Regulation 1371/2007 on rail passengers' rights and obligations - Directive 2007/58/EC on liberalisation of passenger services - Directive 2007/59/EC on the certification of train drivers	2007	Opening the rail passenger market starting with international services in 2010.

Source: SIKA 2009

The first railway package was primarily intended to expose freight traffic within the EU to competition; international traffic was to be opened up to competition in the first stage and all rail freight traffic within the EU in the second stage. It was to be made possible for the freight transporters of the previous state monopoly to be subject to competition by allowing new undertakings to enter the market and compete on equal terms with the previous monopoly undertaking. To achieve this, Member States were urged to simplify entry into the market by a transparent procedure through the organisational separation of infrastructure management from the freight services of the previous monopoly and to establish a supervisory authority which would ensure that the new regulatory framework operated in a non-discriminatory way.[5]

[5] SIKA (2009): *EU:s första järnvägspaket – implementering och effekter*

To summarise, the first railway package contained the following requirements:[6]

- Separation of the management of infrastructure, freight and passenger services, at least into separate divisions with their own profit and loss accounts and balance sheets.
- Allocation of train paths and fees for access to the infrastructure in a non-discriminatory way
- The establishment of a rail regulator, which is independent of the infrastructure manager and the train operators and deals with appeals in the event of disputes.
- A performance-based system to incentivize the infrastructure manager
- The infrastructure manager shall be in financial equilibrium - either through the regulatory system or by means of a multi-annual contract lasting at least three years – whilst maintaining pressure for cost reductions. .

While the focus of this report is on implementation of the first railway package, it is nonetheless motivated to touch briefly on the content of the two following packages. This is partly because the content affects the rate of implementation of the first package and partly because any policy conclusions ought to be viewed in the light of the two following packages.

The second railway package, adopted in 2004, aimed at speeding up the liberalisation of international freight services. The package brought forward the opening of the market from 2008 to 2006. The second package made it possible for foreign operators to engage in domestic freight services including those engaged in cabotage. The package also includes a directive on safety and technical harmonisation. The directive for interoperability was updated and a new European railway agency (ERA) for interoperability and safety established.

The package was designed in such a way as to enable Member States to implement changes within the framework of the national regulatory frameworks and institutional structures that existed prior to the railway packages. This means that considerable differences remain after the adoption of the railway packages with regard to the opening of the market, the role of the infrastructure manager and his relation to operators, the principles for setting infrastructure fees and the level of ambition for the role of the railway in the transport system as a whole.

The third railway package is intended to open the market for passenger services to competition starting with international passenger services from 1 January 2010.

[6] Nash, C. and Matthews, B. (2009): *European transport policy; progress and prospects,* Institute for Transport Studies, Leeds.

3 Developments within the rail sector

It is, of course, important to follow developments in the rail sector and its competitiveness in relation to other modes of transport to make an assessment of whether the proposed measures have had the intended effect. This chapter therefore presents the development within the rail sector in relation to a number of important parameters. One difficulty is that it takes a relatively long period of time to compile reliable data that covers the whole EU.

3.1 The railway and other modes of transport

In the case of freight transport performance, a very large share of this takes place by road (45.6%) and inland waterway and maritime transport (39.6%). Rail transport accounts for just over 10 per cent of freight transport performance, which must be considered as a relatively low share (Figure 3.1).

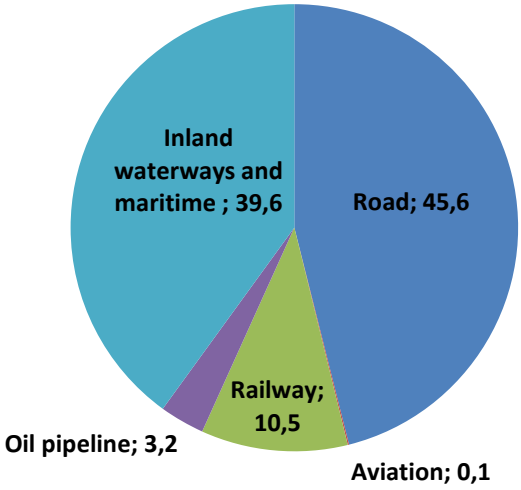

Figure 3.1: Distribution of freight transport performance within the EU in 2006 (tonne km.)
Source: Eurostat 2009

Developments over time have not either been especially positive for rail traffic. The railway's share of land freight transport performance on land has decreased (Figure 3.2). In connection with the expansion of the EU with a number of countries from the former Eastern Bloc, the share of the railway increased since a larger proportion of freight transport took place by railway in the new Member States. As road standards have improved the railway's share of transport performance has also decreased in these countries.

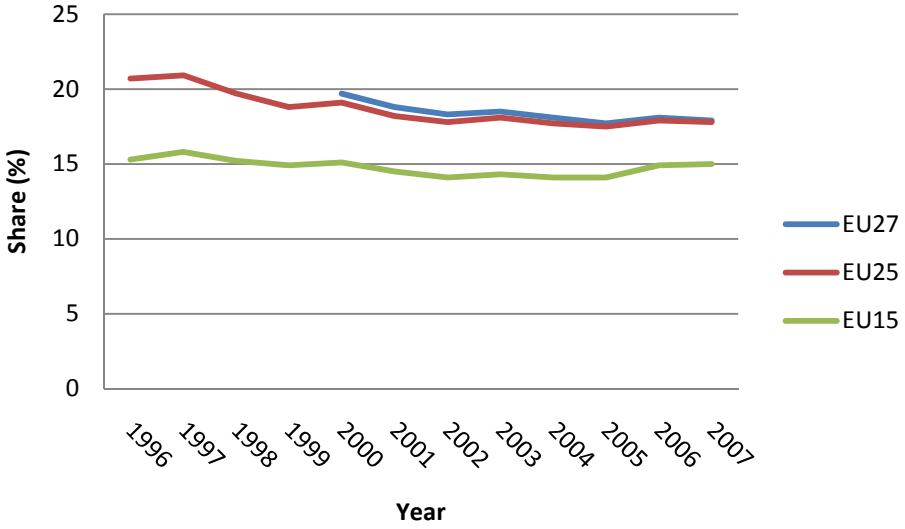

Figure 3.2: The railway share of freight transport performance by country
Source: Eurostat's website

The relatively low share of freight transport is a problem since this development is taking place against the intentions of EU transport policy. The White Paper[7] talks in terms of restoring the balance between modes of transport. An increased share of transport by rail is one way of reducing road congestion but it can also contribute to the achievement of environmental and climate goals. A well-functioning rail sector can also contribute to strengthening t he competitiveness of the business sector and to the realisation of the internal market.

[7]Commission of the European Communities (2001): White Paper: European Transport Policy for 2010, *Com (2001) 370 final,* Brussels.

3.2 Development of the cross-border rail market

The period of time that has elapsed since the market was to be opened for international freight services in 2006 is not particularly long. It is not therefore possible on the basis of available data to say anything about the effects of the first railway package on the development of international freight traffic by railway. Within EU25, transport volumes has increased from just over 160 billion tonne kilometres to just under 174 billion tonne kilometres between 2005 and 2007, corresponding to an increase of just over 8 per cent (Figure 3.3).

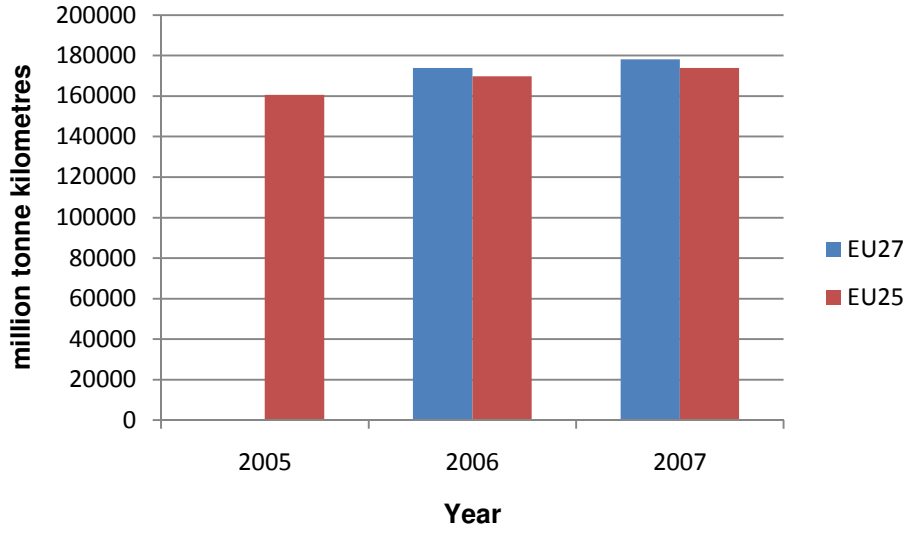

Figure 3.3: International freight traffic by rail
Source: Eurostat 2009

The railway's share of the international freight transport varies relatively greatly between different countries (Figure 3.4). The average for EU27 is just under 39 per cent of tonnes loaded and just over 39 per cent in terms of tonne kilometres. However, these figures do not include transit traffic. Greece, Latvia and the Netherlands have a very high share of international freight transport by rail both in terms of tonne kilometres and in tonnes loaded. The figure does not include shipments loaded outside the EU.

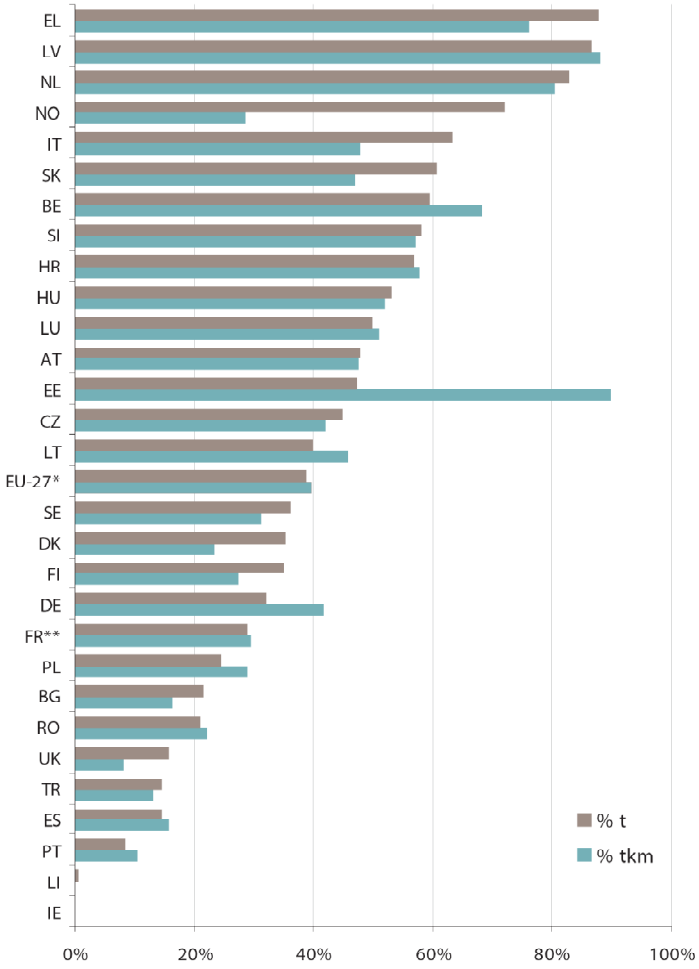

Figure 3.4: Rail goods transport: share of international transport (incoming and outgoing) in total 2007 (tonne and tonne km)
*estimate (FR: 2006) **2006
Source: Eurostat 2009

The rail undertakings themselves are an important part of a cross-border European rail market. The largest company is German DB Schenker with a turnover of EUR 3 815 million (Table 3.1). The size of the undertakings can be explained to some extent by the differing visions of different countries for the future of the previous monopoly. This reasoning is further developed in section 4.1.

Table 3.1: Europe's largest rail freight undertakings

Company and country	*Turnover 2007 (or 2008)*
DB Schenker, Germany	3 815 million € (2008)
Rail Cargo Austria (RCA), Austria	2 417 million €
SNCF, France	1 600 million € (2008)
PKP, Poland	1 273 million €
Trenitalia, Italy	1 009 million €
Green Cargo, Sweden	630 million €
CFR Marfa SA, Romania	544 million €
EWS, U.K. subsidiary of DB Schenker	465 million €
ZSSK, Slovakia	459 million €
Renfe, Spain	371 million €
MAV Cargo, Hungary subsidiary of RCA	355 million €
B-Cargo (SNCB), Belgium	350 million €

Source: SIKA 2009

A bearing idea of the first railway package is that increased vitalisation should vitalise the rail sector. To increase competition, the new companies entering the market must be able to take market shares. The market shares of companies entering the market vary greatly among the Member States (Table 3.2). The majority of countries show at any rate a positive trend through the market share of the new entrant companies being larger in 2008 in comparison with 2006.

Table 3.2: Market share of new entrant companies in 2006 and 2008

Country	*Market share, new entrant companies (%)*	
	2006	*2008*
Belgium	3	6.1
Bulgaria	3.2	14.3
Denmark	0	5*
Estonia	30.6	49
Finland	0	0
France	0.6	10
Greece	0	0
Ireland	0	0
Italy	11.5	11.5*
Latvia	10.6	0
Lithuania	0	0
Luxembourg	0	0
The Netherlands	18	25
Poland	16.8	24
Portugal	0	0
Romania	26.7	41
Slovakia	2.9	2
Slovenia	0	0
Spain	4.9	5
U.K.	100	100
Sweden	32.5	36
Czech Republic	Data unavailable	Data unavailable
Germany	16.4	22
Hungary	9	14.4
Austria	10	14

*Estimate by Hultén
Source: SIKA 2009

4 Implementation of legislation

This chapter will initially focus strongly on legislation and its implementation. During this review, it should be borne in mind that correct implementation of legislation need not lead to good practice and vice versa. The very worst is the combination of both poor legislation and practice. This could be illustrated by a poorly functioning rail market with reduced market shares and low market opening (A in Figure 4.1). The most desirable is, of course, a combination of correct implementation of legislation and good practice. This means that the focus should not solely be on implementation of legislation, the result of regulations in the form of the railway sector's market share of transport volumes should also be taken into account.

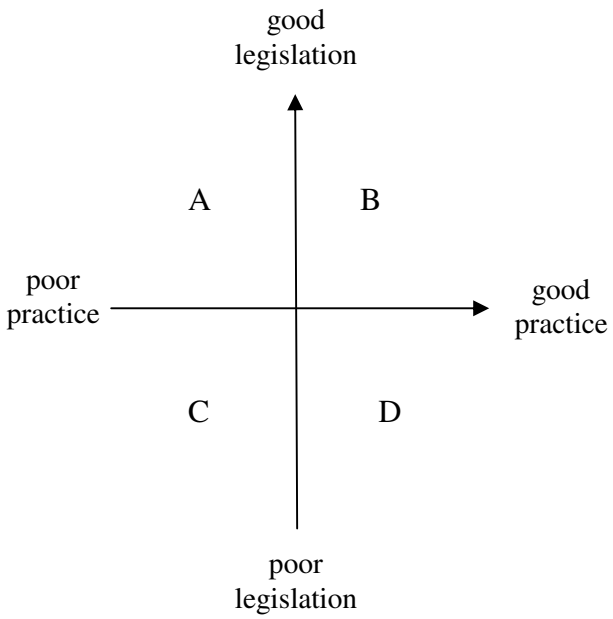

Figure 4.1: Different combinations of legislation and practice

It is possible to obtain a picture of the implementation of the first railway package by studying the criticisms made to the Member States. These criticisms have been made in the form of *letters of formal notice* that were issued in summer 2008 and a revised version, *reasoned opinions,* of these criticisms was issued in October 2009.

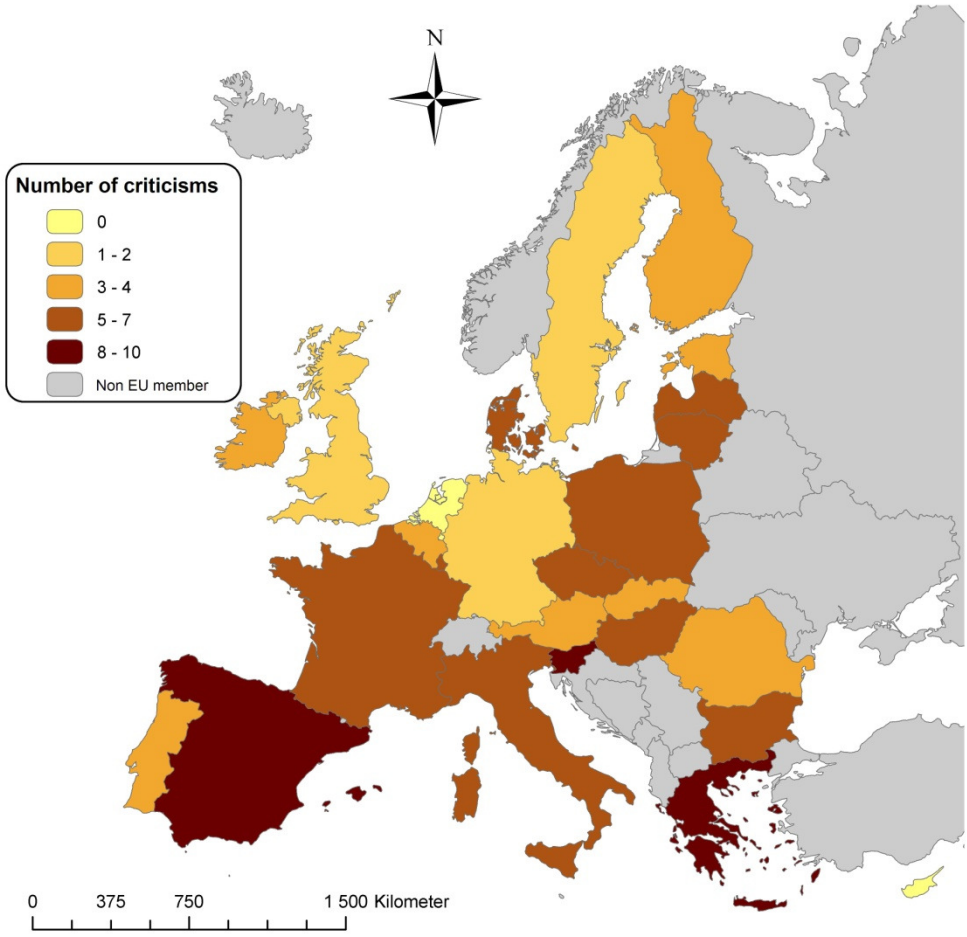

Figure 4.2: Number of criticisms made by the Commission in the form of letters of formal notice
Source: Commission of the European Communities 2008

Spain received most criticisms (10) followed by Greece and Slovenia according to the notice issued in summer 2008 (Figure 4.2). Of the countries with rail traffic, only the Netherland did not receive any criticism. Sweden, Germany and the U.K. have a good position with only one or two criticisms.

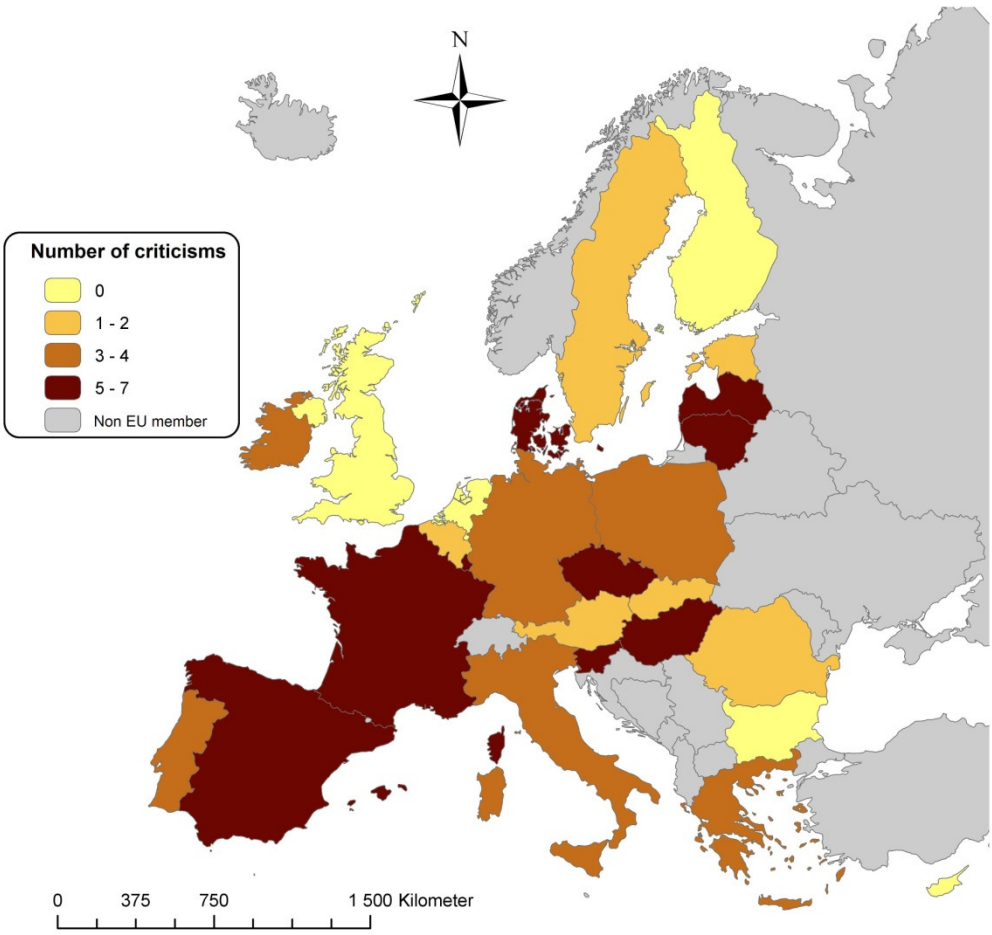

Figure 4.3: Number of criticisms from the Commission in the form of reasoned opinions
Source: Commission of the European Communities 2009

There has been an overall decrease in the total number of criticisms in the Commission's criticisms from October 2009. Spain now shares the last place with France which has seven criticisms (Figure 4.3). Among the countries that have no criticisms are the Netherlands (as before) and now the U.K., Finland and Bulgaria.

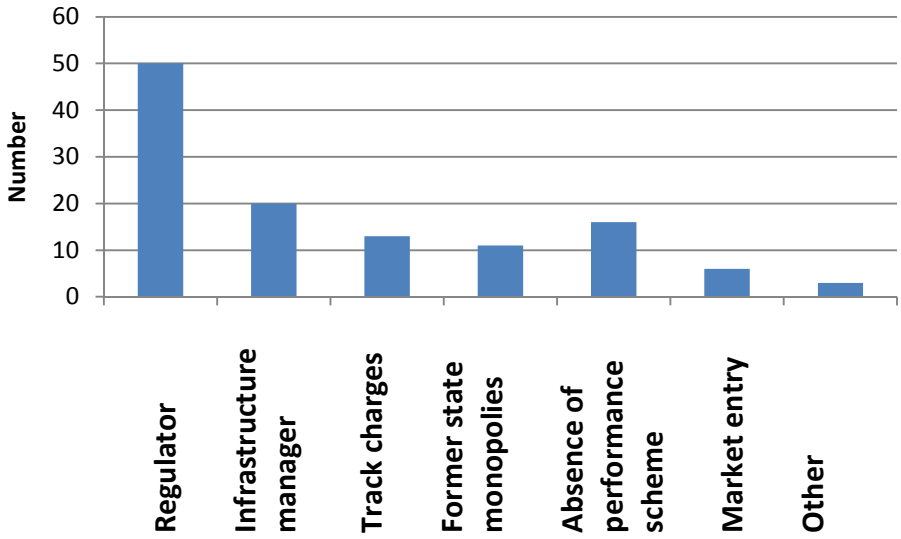

Figure 4.4: Number of criticisms for different areas according to letters of formal notice
Source: Commission of the European Communities 2008

According to Figure 4.4, most criticisms can be linked to the rail regulator. This may, for example, concern the regulator not being independent or lacking sufficient power. The next largest category of complaints is those related to infrastructure management. This may, for example, relate to the infrastructure manager not deciding over infrastructure fees independently or the infrastructure manager not being independent.

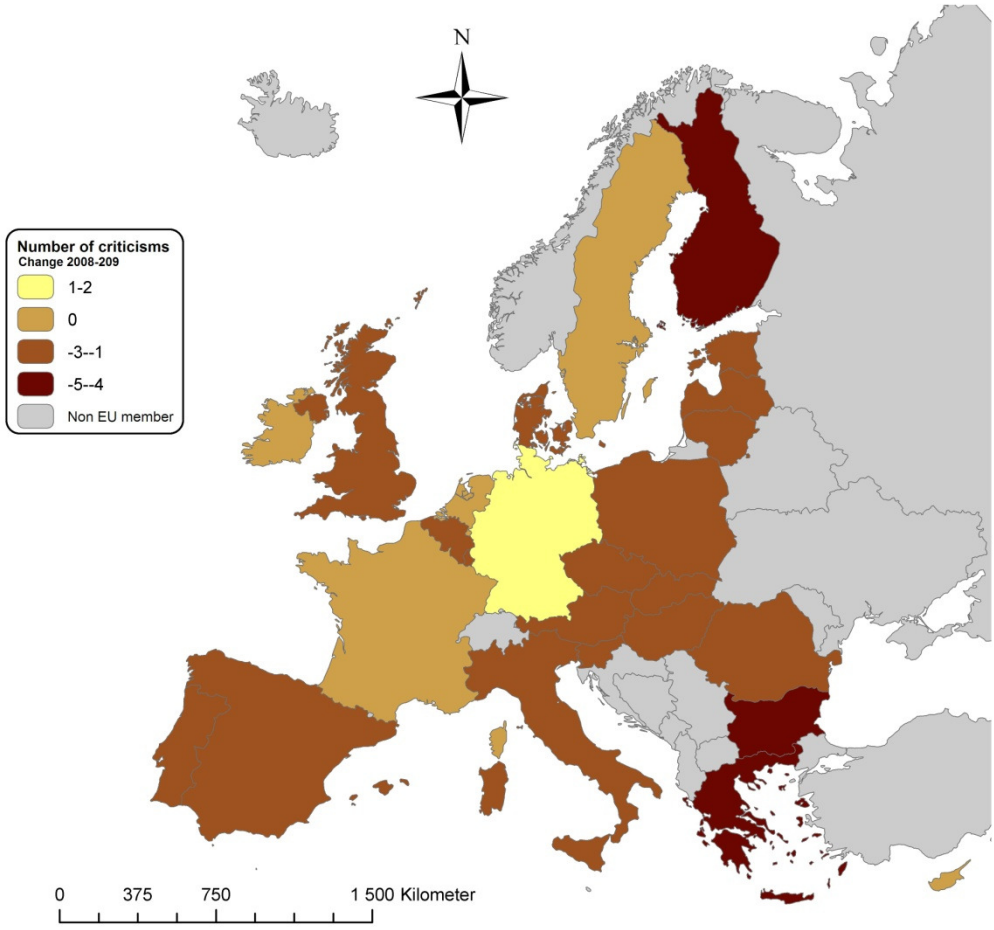

Figure 4.5: Difference in number of criticisms between letters of formal notice and reasoned opinions
Source: Commission of the European Communities 2009 and 2008

Figure 4.5 shows a comparison between the number of criticisms by the Commission in summer 2008 and October 2009 respectively. Germany is the only country that has received more criticisms. Greece which originally received many criticisms has improved considerably with a reduction of four criticisms. Bulgaria has also improved greatly and now has no criticisms.

This type of summary provides an indication of which countries have made most progress with implementation. However, it is important to bear in mind that the criticisms differ in character and thus present varying degrees of difficulty when remedying them. In certain cases, there is an Absence of implementation of performance scheme to encourage railway undertakings and infrastructure manager to minimize disruption and improve the performance of the railway network and in other cases the entire structure of Government agencies in the sphere of transport must be reviewed.

4.1 Different models for implementation and their effects

This section is based to a great extent on the consultancy commission carried out by Staffan Hultén on behalf of SIKA[8]. It is important to note that the EU Member States have chosen to implement the first two railway packages in many different ways. One initial difference is that countries have given the new supervisory authority (the rail regulator) more or less independence from the government of the country. In some countries, the railway regulator is part of a ministry. In other countries, the rail regulator is a separate agency and in a third group the rail regulator is included in a larger agency which can either occupy itself solely with transport issues (such as the Swedish Transport Agency) or with transport-related issues and closely-related industries (The Netherlands).

Another difference is that the countries have adopted different organisational forms for the activities of the previous monopoly. In some countries, such as Germany, Belgium and Austria, the infrastructure manager, freight traffic and passenger transport undertakings are all part of the same group. In some other countries, such as France, Spain and Finland, the infrastructure manager has been separated from freight traffic and passenger traffic companies which are included in a public company. In third type of countries, the infrastructure manager, the freight traffic companies and the passenger traffic companies have been split up into separate units. However, there are a number of different solutions within this group. In the United Kingdom, the state controls the infrastructure manager but has no ownership stake in the freight and passenger transport undertakings. In Denmark and the Netherlands, the state owns both the infrastructure manager and the passenger transport undertaking, while the freight transport undertaking has been sold to DB Schenker. In Sweden, the state still owns the infrastructure manager and the freight and passenger transport undertakings. In addition to these organisational solutions, there are also other important differences. In most countries, almost all stations are included in the organisation of the infrastructure manager. Two exceptions are Sweden and the U.K. where most stations have been transferred to other companies. There are also considerable differences in how large the organisations have become after being split up into infrastructure management, freight transport and passenger transport companies. In France, for example,. RFF (infrastructure manager) has less than 800 employees, which can be compared with 201 000 in SNCF. SNCF also takes care of the de facto track maintenance in the French rail system. In Spain, Adif, which corresponds to RFF, has over 14 000 employees. In Finland, the track maintenance organisation (RHK) which is responsible for the railway system has 120 employees compared with over 10 000 working within the railway as VR group employees.

A third difference is that the countries have different visions regarding the future of the previous public monopoly. In, for example, the U.K., Denmark and the Netherlands, the state has privatised the freight part of the activities of the previous monopoly. In particular, German DB but also to a certain extent French SNCF buy up other freight companies to strengthen their position in the European market. DB Schenker has, for example, bought the privatised freight parts of the Dutch and Danish state railways and purchased two Polish companies, PTK with

[8] Staffan Hulténs report has been published in its entirety (in Swedish) as SIKA PM 2009:5

2 000 employees and PCC with 5 800 employees (DB Schenker, 2009). The company has also acquired EWS, which is responsible for the major part of freight traffic in the U.K. SNCF has recently bought Veolia's rapidly growing rail freight company (Journal of Commerce, 2009). Swedish Green Cargo has also taken a large ownership stake (49 %) in the privatised freight part of the Danish state railways (DSB). Europe's largest rail freight companies are shown in Table 3.1. For companies also involved in other types of transport, only the railway part is included in this summary.

Model to evaluate the effects of the first and second railway package

The changes in the regulatory framework for the rail industry adopted in the first and second railway packages can be expected to lead to both direct and indirect effects. A first type of direct effect is the organisational changes we have described above. A second type of direct effect is the entry of new players into the national rail freight markets, providing increased competition. A desired indirect effect is to increase the market share of rail freight traffic in competition with other modes of transport. The last type of effect is also affected by the size of investments made in the railway systems, which is an issue not dealt with in the railway packages.

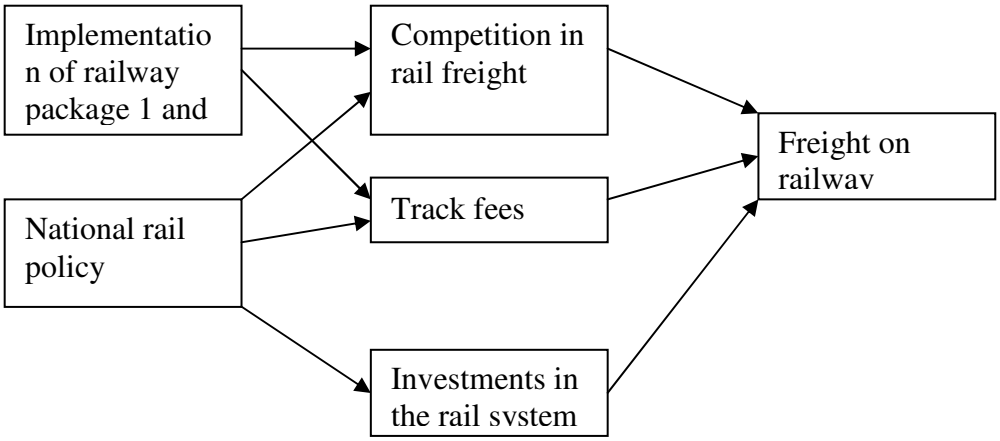

Figure 4.6: Factors explaining the development of rail freight traffic
Source: SIKA 2009

The model in Figure 4.6 shows the links that will be studied with the aid of statistical material and other information from the EU Member States. These links will be studied through a data material that covers these factors and the possible links shown in the figure above.

Implementation of the railway packages is measured either as the deregulation regime that the countries have chosen or as how many criticisms the Commission made to the Member States during summer 2008 and in October 2009 on implementation of the first two railway packages. The number of criticisms was surveyed in the form of a number of map pictures in the introduction to this chapter. In future, the term ideal type will be used for the concept of deregulation regime. The term ideal type reflects the idea that there are stylized unifying

features in how groups of countries have designed their deregulated railway systems. This means that the ideal type combines a country´s national rail policy with the requirements of the railway packages.

Staffan Hultén has identified seven different ideal types which have been designated by the figures 1 to 7, and where a higher figure indicates a more extensive deregulation:

1. This ideal type is highly reminiscent of the form of organisation that Sweden had during the period 1985-88, i.e. an integrated group structure with infrastructure manager, passenger transport undertakings and freight traffic. The common functions are as a rule also in the group. In some countries, bus and coach services and other activities are also included. The major differences compared with Sweden in 1985-88 are that there is a rail regulator and that competitors have the right to enter the market.

2. In this ideal type, passenger transport and infrastructure form one company which is controlled by the state. The freight traffic part of the previous monopolist has been privatised. Hungary is the only country which has chosen this ideal type and the freight transport undertaking has been sold to the Austrian state railways.

3. In this ideal type, the infrastructure manager has been organisationally separated from the previous monopoly's passenger transport and goods transport undertakings. The infrastructure manager is mainly a planning and ordering unit with few employees. The actual maintenance and operation of, for example, railway stations is carried out by the previous monopoly. The three organisations are owned or controlled by the state.

4. This ideal type is reminiscent of ideal type 3 but in this case, the infrastructure manager is a considerably larger organisation and takes care of maintenance in-house and is also in some cases in charge of the stations. Sweden organised its railways between 1988 and 2000 mainly in this way.

5. In this ideal type, infrastructure management, freight traffic and passenger transport are split into three different organisations. The Swedish railway has been organised in accordance with this ideal type since 2001.

6. This ideal type resembles the fifth although here the freight transport undertaking has been privatised and sold to a foreign company. Denmark and the Netherlands have chosen this ideal type.

7. In this ideal type, all passenger transport and freight traffic have been privatised. The infrastructure management is controlled by the state. The U.K. is the only country which has organised its railway in this way. Table 4.1 shows the ideal type to which the respective EU Member State belongs.

Table 4.1: Ideal types and criticisms from the Commission in 2009

COUNTRY	*IDEAL TYPE / REGIME*	*NUMBER OF COMMENTS BY THE COMMISSION IN 2009*	*COMMENTS THAT IM ARE NOT SUFFICIENTLY INDEPENDENT FROM THE PREVIOUS MONOPOLY*
Belgium	1	2	Yes, rules are lacking to guarantee the independent of IM from the previous monopoly
Bulgaria	4	0	
Denmark	6	5	
Estonia	1	2	Yes, the rail operator takes care of many of the common functions
Finland	3	0	
France	3	7	Yes, the rail operator takes care of many of the common functions
Greece	1	4	
Ireland	1	3	
Italy	1	4	Yes, rules are lacking to guarantee the independent of IM from the previous monopoly
Latvia	1	5	Yes, the rail operator takes care of many of the common functions
Lithuania	1	5	
Luxembourg	1	5	Yes, the rail operator takes care of many of the common functions
The Netherlands	6	0	
Poland	1	4	Yes, rules are lacking to guarantee the independent of IM from the previous monopoly
Portugal	4	3	
Romania	1	1	
Slovakia	4	2	
Slovenia	3	6	Yes, the rail operator takes care of many of the common functions
Spain	4	7	
U.K.	7	0	
Sweden	5	2	
Czech Republic	4	6	
Germany	1	4	Yes, rules are lacking to guarantee the independent of IM from the previous monopoly
Hungary	2	5	Yes, the rail operator takes care of many of the common functions
Austria	1	2	Yes, rules are lacking to guarantee the independent of IM from the previous monopoly

Figure 4.7 shows the link between ideal type and the number of criticisms from the Commission in 2009. It can be seen from the figure that the largest number of criticisms is received by countries that have started to break up their monopoly's group structure. One interpretation of this result is that a lot of problems may arise when countries move from the original monopoly structure to organisational units with a lower or higher extent of independence. The least number of criticisms are received by the countries that have split the monopoly's group into three parts – Infrastructure manager, passenger transport and goods transport. In ideal type 1, between one and five criticisms are made. This is probably due to the fact that a country can, once it has adopted this organisational solution, decide to implement it in a way that better or worse accords with the intentions of the first railway package.

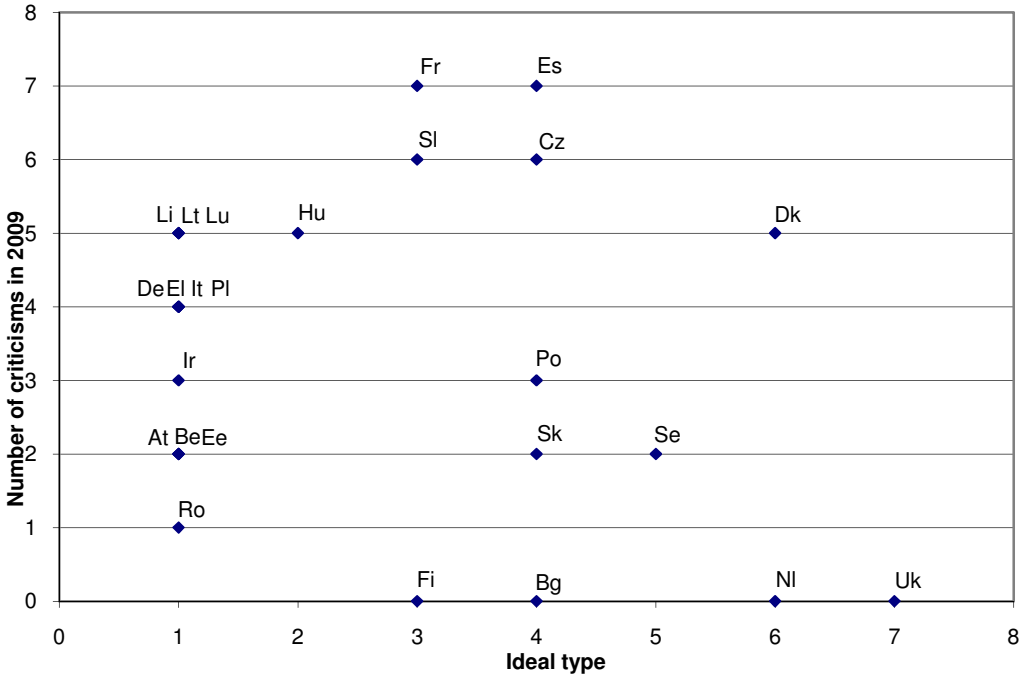

Figure 4.7: Correlation between ideal type and criticisms 2009
Source: SIKA 2009

The factor competition or intensity of competition can be measured in three different ways. Partly by measuring how large a market share new entrant companies had in 2008, and partly by measuring the change of the market share of new entrant companies between 2006 and 2008. These results are shown in Chapter 3. In this report, intensity of competition will be measured by producing a measure of HHI (Herfindahl-Hirschman Index – the squares of the largest companies' market shares) for the largest company in 2008.

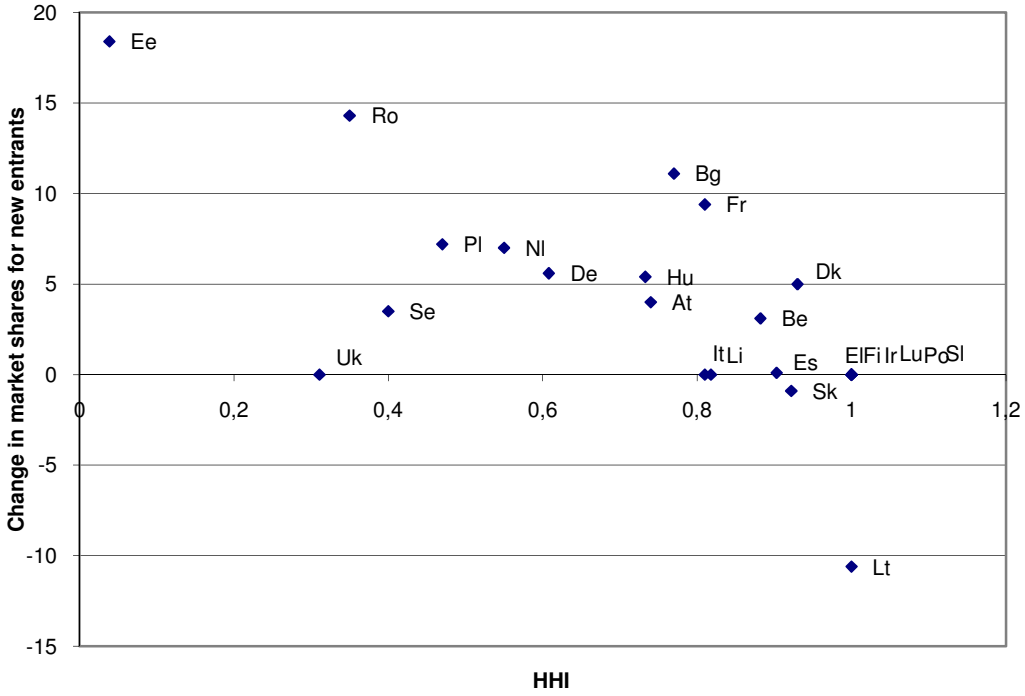

Figure 4.8: Correlation between HHI and change of new entrant companies' market share between 2006 and 2008
Source: SIKA 2009

Figure 4.8 investigates the correlation between HHI, i.e. the market share of the largest company, and the change in the share of the national markets of the new entrant freight companies between 2006 and 2008. A certain correlation is shown in the figure, according to which, put simply, it can be said that a lower HHI in 2008 indicates increased competition in the period 2006-2008. Another result had to say the least been surprising bearing in mind the fact that deregulation started in the 21st century for most countries.

In Figure 4.9 and Figure 4.10, it is investigated whether there is any correlation between ideal type and two different measures of competition: the market share of new entrant companies and HHI. In a first ocular inspection of the material, (i.e. what can be seen of correlations in the figure), it seems that there is no correlation between the variables on the two axes. If ideal type 1 is excluded, a positive correlation does appear, however, between ideal type and the market share of new entrant companies in 2008 and a negative correlation between ideal type and HHI, i.e. the correlations go in the right direction. The more the market is opened for competition through a dissolution of the old monopoly, the greater will be the new entrant company's market share. In these two figures and in many figures later in the report, the values for countries in type 1 seem to be so heterogeneous that it is not possible to see any correlation if this ideal type is included in the assessment. Ideal type 1 will therefore be excluded from certain analyses in order to trace patterns in the rest of the material.

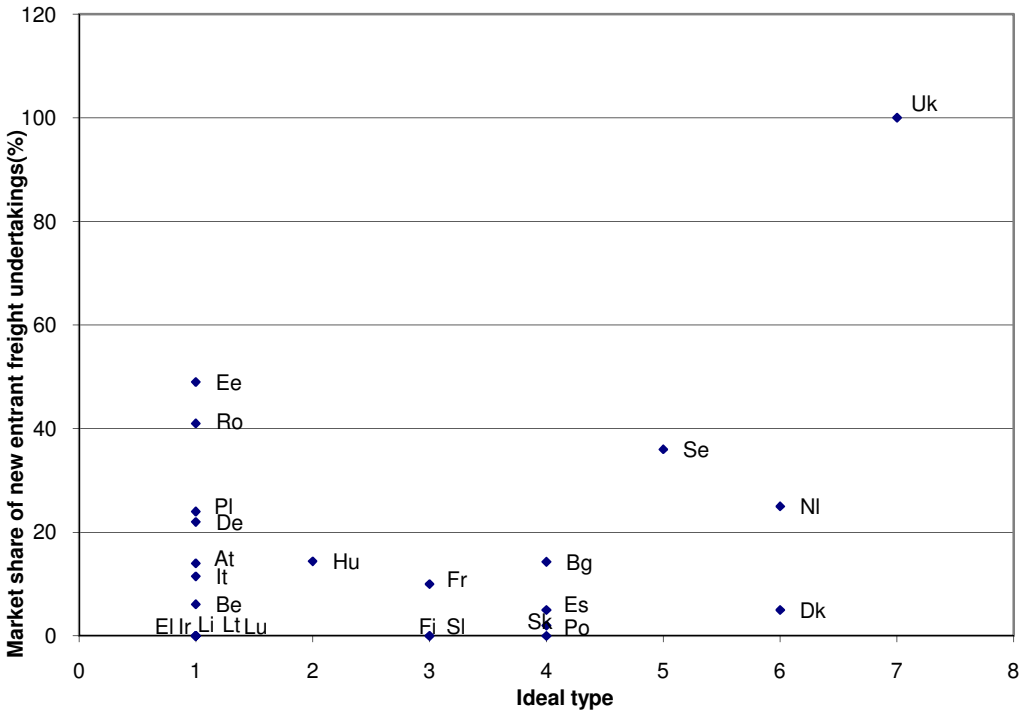

Figure 4.9: Ideal type and market share of new entrant freight undertakings
Source: SIKA 2009

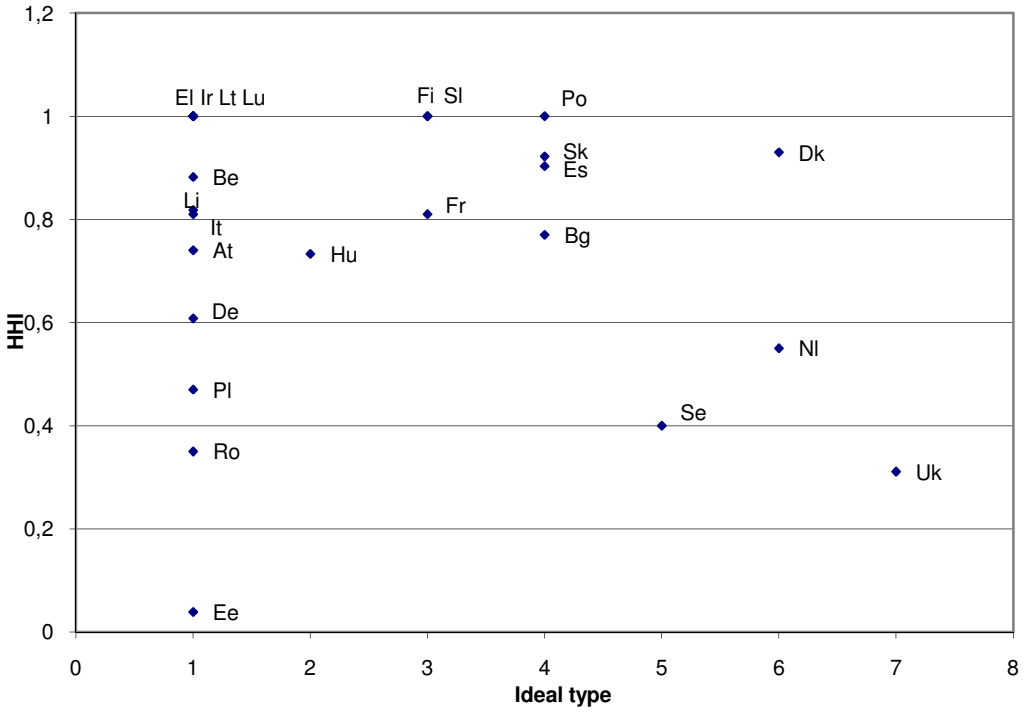

Figure 4.10: Ideal type and HHI for the largest company in the rail freight market in 2008
Source: SIKA 2009

In Figure 4.11 an investigation is made on whether there is a correlation between infrastructure fees (measured as € per km for a 960-tonne freight train) and ideal type. In this figure, there does not seem to be any correlation between the two variables. The infrastructure fees may be high or relatively high in the event of a far-reaching deregulation and may be low or relatively low in the event of a less far-reaching deregulation. However no country that has retained a group structure has an infrastructure fee less than EUR 2 per km for a 960-tonne freight train and five of 13 countries that have broken up the group structure have an infrastructure fee that is less than EUR 2 per km for a 960-tonne freight train.

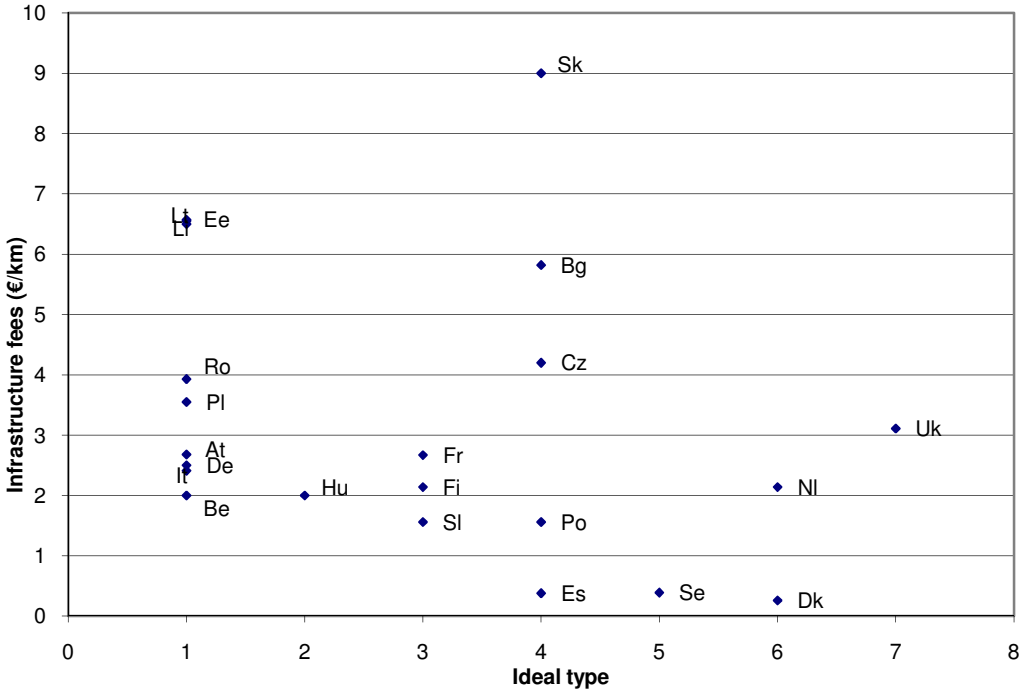

Figure 4.11: Ideal type and infrastructure fees in € per km for a 960-tonne freight train 2007-2009
Source: SIKA 2009

The correlation between competition and infrastructure has also been investigated. There are many reasons why the level of infrastructure charges could be affected by how intensive competition is in a market. One reason is that firms competing in a competitive market are less willing to pay high infrastructural fees which make it difficult for them to compete with other modes of transport, while state-owned monopoly companies can be compensated for high infrastructure fees through government assistance. As shown by Figure 4.12, where the correlation between HHI and infrastructure fees is investigated, no such correlation is visible in the data material.

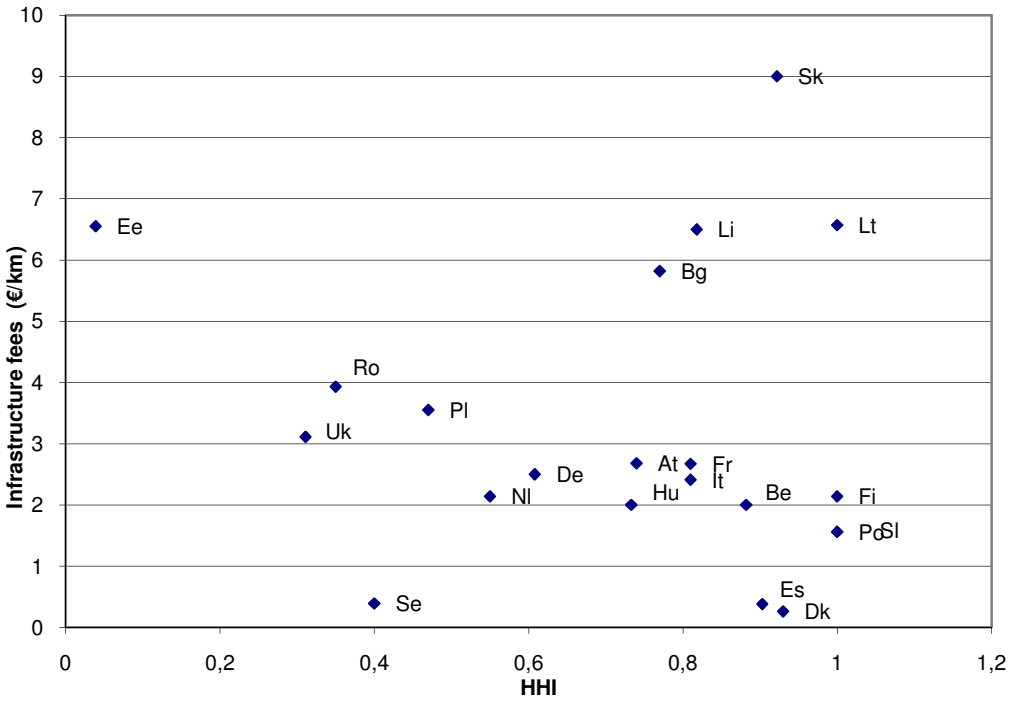

Figure 4.12: HHI and infrastructure fees in € per km for a 960-tonne freight train in 2007-2009
Source: SIKA 2009

Figure 4.13 studies the correlation between ideal type and infrastructure investments. The latter measure measures the total investments distributed per track kilometre (the entire country's rail system), including track maintenance, adjusted for purchasing power. Again, it may be noted that ideal type 1 is a very heterogeneous group with a very large variation in investment volumes. As a whole, there is no correlation between the two variables.

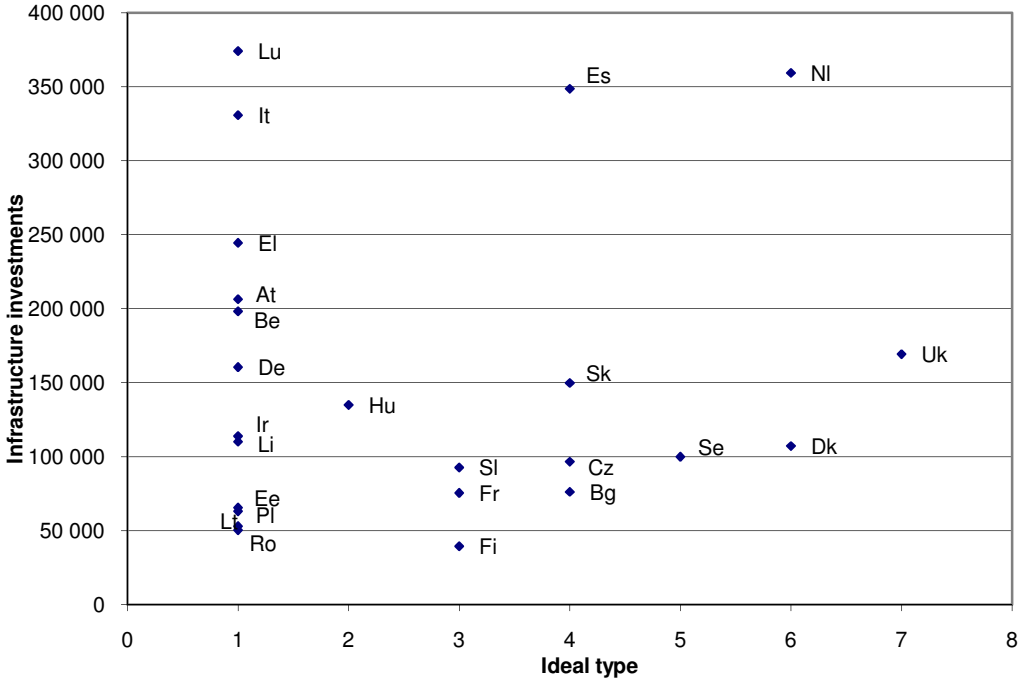

Figure 4.13: Ideal type and investments in the railway system
Source: SIKA 2009

The perhaps most important goal of EU railway policy is to increase the share of transport performance of the railway within the EU. The following figures study how the factors (variables) that are treated above affect the development of the number of tonne kilometres from 2000 to 2007. The year 2007 was selected as the last observation due to the economic crisis already leading to drastic reductions in rail freight transport in many Member States in 2008.

Figure 4.14 contains information about HHI (the square of the largest company's market share) and the change in the number of tonne km for the period 2000-2007. The two extreme points among the countries which only have one freight operator (the HHI measure equals 1) can be worth noting, in particular since they concern two countries that almost lack rail freight transport undertakings. The value for Greece that went from 0.4 to 0.8 million tonne km, the value 20 for Ireland which went from 0.5 to 0.1 million tonne km. Even if these two values are excluded, there is no clear correlation between competition and transport performance.

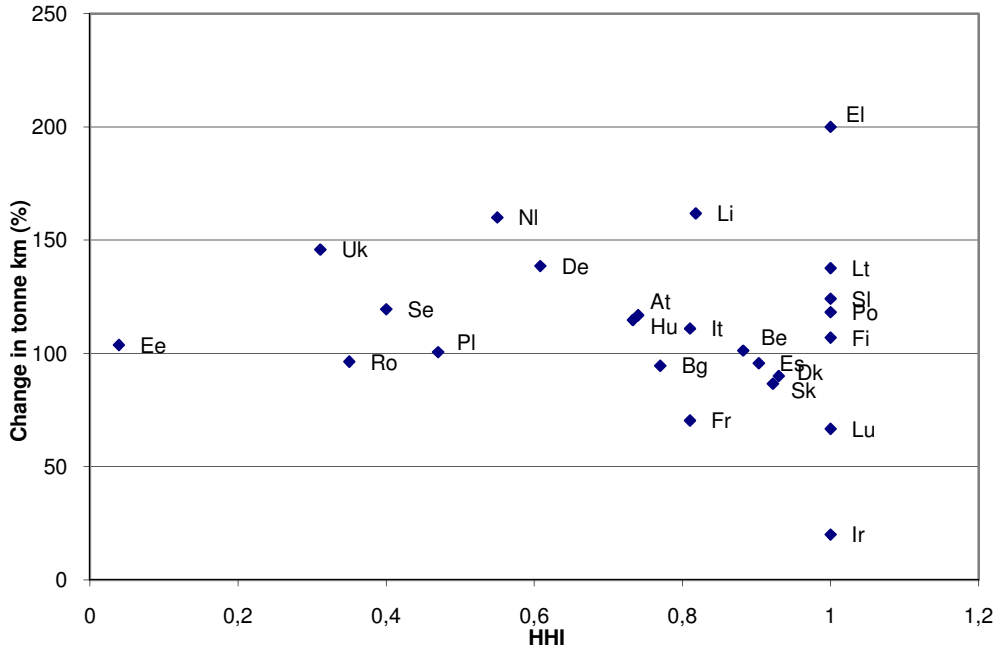

Figure 4.14: HHI and change in the number of tonne km
Source: SIKA 2009

Figure 4.15 investigates the correlation between the size of infrastructure fees and changes in rail freight traffic. Unfortunately, it has not been possible to find any usable data for the size of infrastructure fees before implementation of the railway package. For example, the French SNCF has emphasised in a report that their freight traffic has been negatively affected by increased infrastructure fees in the past few years. Figure 4.15 does not show any correlation of the type the higher infrastructure fees, the poorer development of freight traffic. One observation that can be made is that the countries seem to belong to different groups. Some with very low infrastructure fees (lower than 1€ per km) which lack a clear development. Countries with medium-high fees (1-3 € per km) which have a good development. Countries with high infrastructure fees (3-6€ per km) which have a weak development of freight traffic and finally countries with very high fees (over 6 € per km) which lack a clear development.

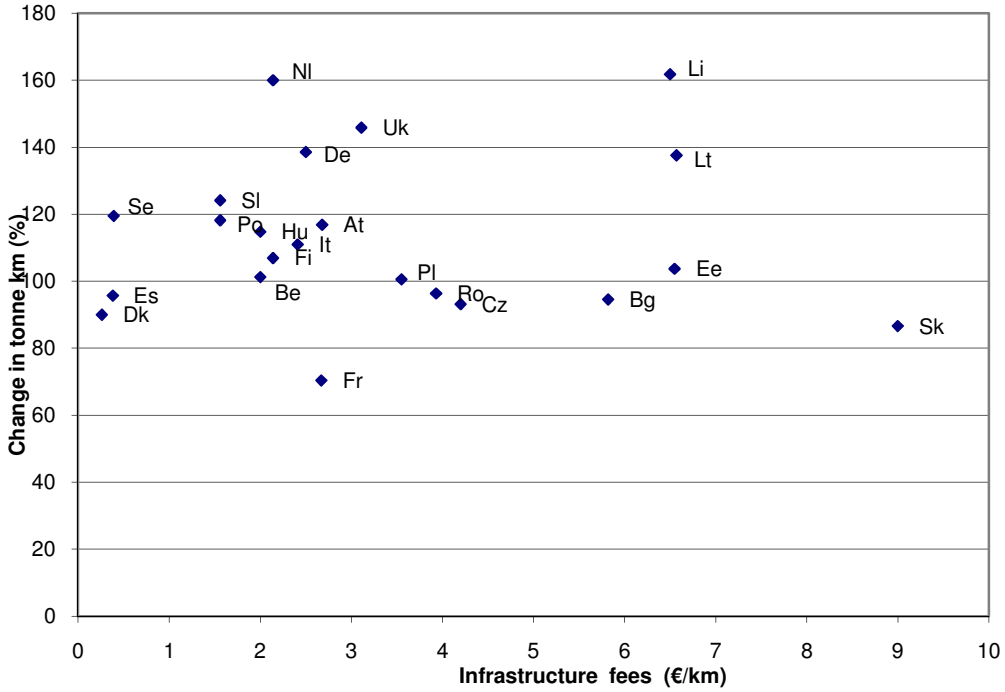

Figure 4.15: Infrastructure fees and change in the number of tonne km in 2000-2007
Source: SIKA 2009

Figure 4.16 shows the correlation between infrastructure investments (defined above) and change of the number of tonne km during the period 2000 till 2007. No correlation of pattern whatsoever can be discerned from this figure. One explanation may be that the measure does not cover investments which are focused on rail freight but on the whole rail sector. In some countries, a high figure for investments reflects improvements for freight traffic while in other countries, it may be investment in new high speed railways. For example, countries with the four highest values have carried out major investments in high-speed rail systems: The Netherlands, Spain, Italy and Luxembourg. However, even if these countries are removed from the figure, no clear correlations appear.

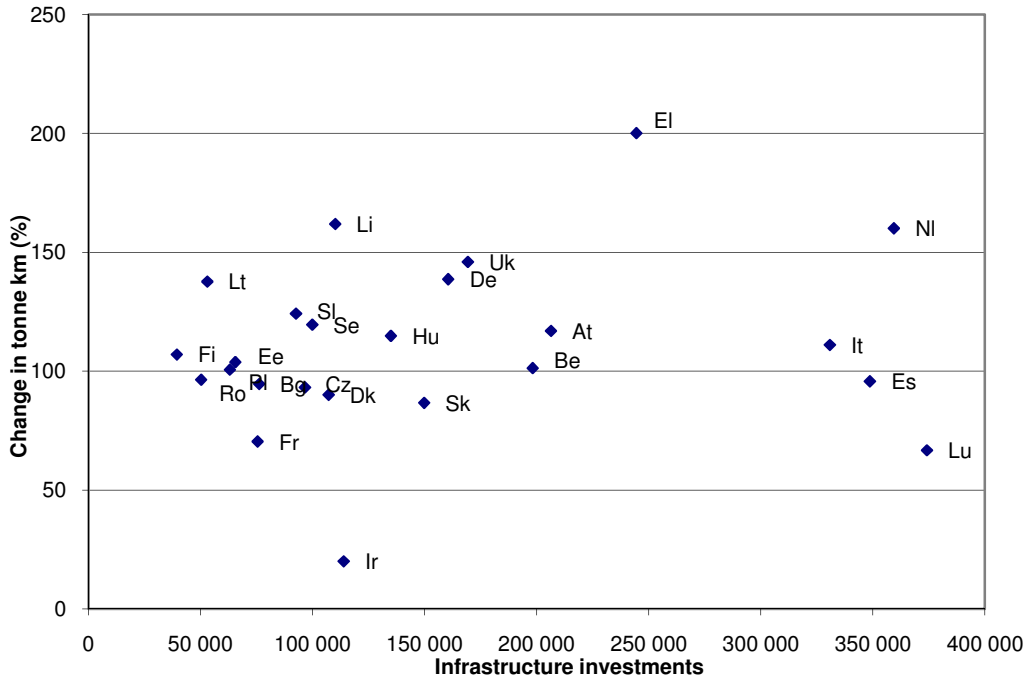

Figure 4.16: Infrastructure investments and change in the number of tonne km, 2000-2007
Source: SIKA 2009

Figure 4.17 shows the correlation between ideal type and change in the number of tonne km. If ideal type 1 is included, no correlation is visible in the material. If this ideal type is excluded, the market with a higher extent of deregulation has a more positive development for rail freight transport than countries with a lower extent of deregulation.

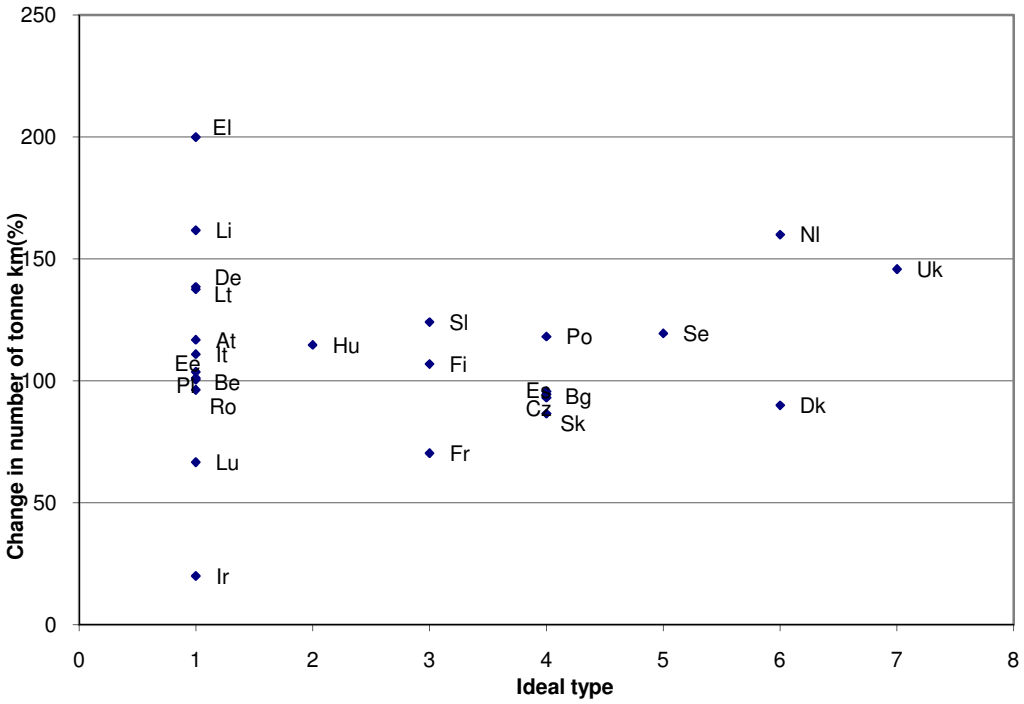

Figure 4.17: Ideal type and change in number of tonne km. 2000-2007
Source: SIKA 2009.

5 Conclusions

The purpose of this report was to investigate which parts of the first railway package that the Member States chose to incorporate or incorporated in a way that was doubtful in relation to the intentions of the package. This purpose included explaining the choices of Member States and the effects that this has had on the competitiveness of the railway and its ability to serve the internal market.

The Commission has pointed out deficiencies in the Member States' implementation of the first railway package on two occasions. These criticisms are a good starting point to survey the extent to which different countries have implemented the first railway package. In the first overview all countries except the Netherlands received some form of criticism. On the second occasion, four countries were not criticised at all. These are Bulgaria, Finland, The Netherlands and the U.K. Most countries received fewer criticisms on the second occasion. Some of the exceptions were Germany which received more criticisms and France, Ireland and Sweden which had an unchanged number of criticisms.

One criticism that has been levelled at many countries is that they have retained their old group infrastructure from the time before deregulation. Other countries that have also retained this infrastructure have not received any criticism at all on this point, which shows that the Commission has not been consistent in its assessments. Another important criticism is that the rail regulator has insufficient power to control competition in the market or to request information from the undertakings. This criticism has also been put forward to countries where there are no competitors to the previous monopolist. This seems strange since the actions of the regulator should be tested in relation to an actual and not a hypothetical situation. The conclusion of these observations is that the flexibility of the regulatory framework and the elasticity of interpretation of the regulations mean that the EU Member States can introduce the railway package in the way that they deem most suitable.

The purpose also includes explaining the choice of the Member States when they implemented the railway package. The most important reason why the countries have chosen to implement the railway packages in different ways is, as has been drawn attention to before, that there has been substantial freedom to interpret how the reforms should be carried out. The following example illustrates this. The Commission has explicitly consented to a rail regulator being able to be part of a government ministry. The package also allows the previous group structure to be retained as long as the infrastructure manager maintains a clear independence from the railway operation. The packages do not either provide clear rules as to how common functions should be organised. The size of infrastructure fees can also vary from 0.25€ per tonne km to almost 10€ per tonne km without this leading to any attempt on the part of the Commission to find clearer rules for how the fees are to be set. Given this situation, different countries have been able to

pursue their national solutions in the rail sector. Some countries have wanted to restrain rail freight traffic by increasing fees. Other countries (Germany, France and Austria) have chosen to build up an international player in rail freight. A third group of companies (Denmark, The Netherlands, Hungary etc.) has wanted to privatise its rail undertakings or for foreign operators to enter their market and the EU regulation has also made it possible for this to happen. Most countries have in the spirit of the package none the less de facto opened their markets for rail freight to competition.

The report also aimed to show the effects that the countries' different ways of implementing the rail package had on the railways' competitiveness and its ability to serve the internal market. Several circumstances demonstrate that the packages already have achieved several of the promised goals. A first observation is that new entrant companies have taken considerable market shares in many rail freight markets. Another observation is that an EU market for rail operators which are active on several national markets is starting to take shape. This type of process has been important in many other deregulated markets: telecommunications, electricity production, etc. A third observation is that at country level, there are now many good examples to learn from. This applies both to the group of countries called EU-15 and the group referred to as EU-12. There are countries in both these groups that have a significantly better development than average as regards exposure to competition and increase in rail traffic.

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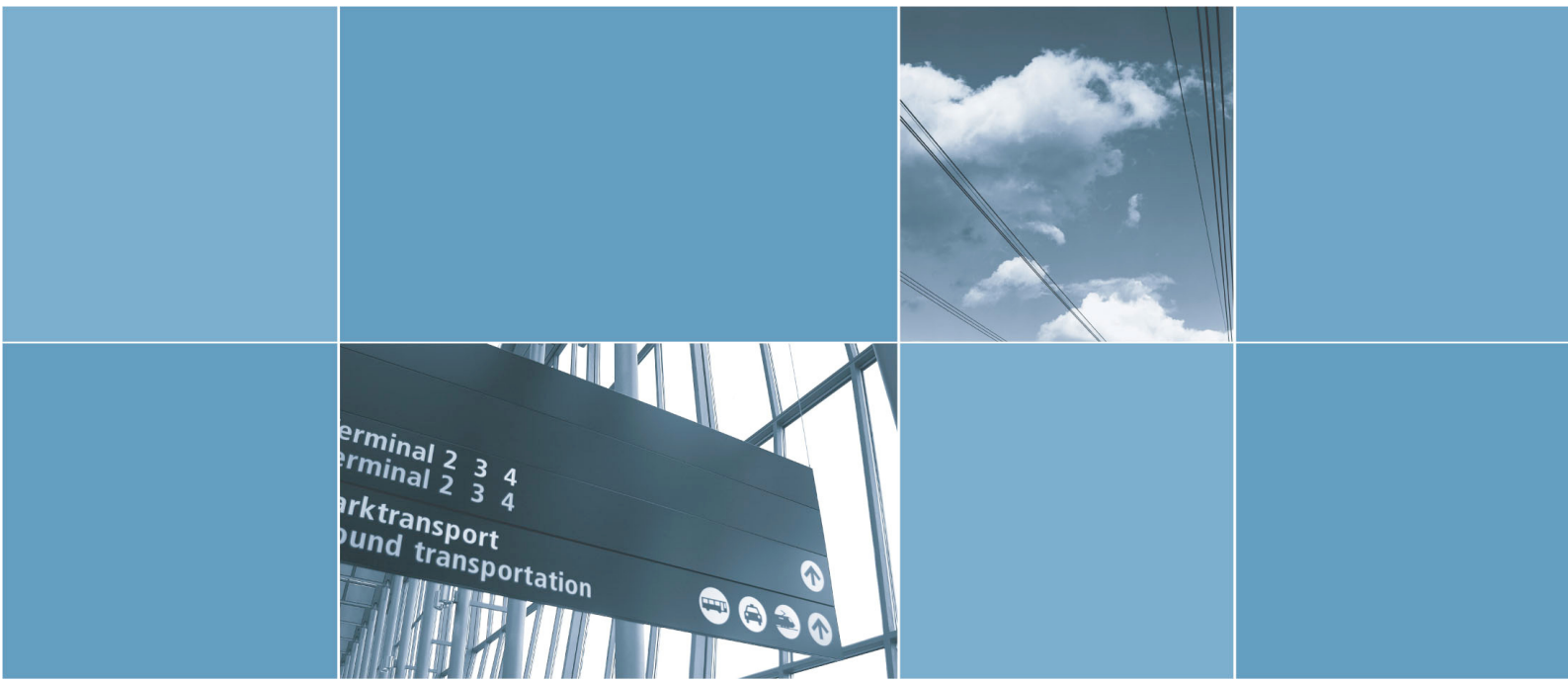

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