Germany and the deregulation of its railways

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ABSTRACT

This paper forms part of the project “Towards efficient competition in railway transportation”
financed by the Swedish Transport Authority, Trafikverket.

EU Member States have implemented EU rail legislation in various ways. Germany’s rail
reform aimed at increasing rail transport and decreasing the sector’s public financial support.
These objectives have generally been reached although opinions vary.

Germany and Sweden have several common features; Regional authorities are responsible
for regional services, often tendered out in competition. Entry on the commercial long-
distance market has been very limited. Sweden has fully separated infrastructure and
operations while Germany retains infrastructure within the Deutsche Bahn group. This
project analyses various aspects of the German railway regulatory framework and draw
conclusions for Sweden and in general.

In Germany principles for capacity allocation and priorities in daily operations are uncertain
and controversial. Framework agreements can only be signed for fixed five year periods or
parts thereof and operators consider this too inflexible.

Incentive or Bonus/Malus agreements between infrastructure managers and operators have
been tried in both countries. Little money changes hands but all parties agree that this area
needs to be developed.

Access to maintenance facilities is regulated but some controversies exist. Rolling stock is
an unregulated area but connected to capacity allocation – if a new entrant gets his capacity
allocation too late he may not be able to acquire rolling stock in time for the start of
operations.
Introduction

This report is a sub-report within the project “Towards efficient competition in railway transportation” (Vägar till effektiv konkurrens inom järnvägen), financed by Trafikverket, the Swedish Transport Authority (formerly the National Rail Administration). Within the project other sub-reports focus on Swedish passenger rail conditions concerning access to rolling stock, stations/terminals, reservation and ticketing systems and train path allocation. It was also considered appropriate to investigate Germany’s experiences of the deregulation of its railway sector with a focus on conditions for competition and obstacles to entry to the passenger market.

After the approval of an abstract submitted to the Thredbo 12 International Conference on Competition and Ownership in Land Passenger Transport this version of the paper was produced.

The author wishes to thank all his German contacts who have collaborated in a most helpful manner. All parties concerned have been given the opportunity to check a draft in English before the submission to the Thredbo conference.

1. Summary

The purpose of the EU’s transport policy is to create environment-friendly, safe and efficient transportation to promote the inner market and allow its citizens to travel freely in Europe. In the railway area, the EU has focused on three aspects: 1) Opening the railway market to competition, 2) Improving interoperability and safety, and 3) Developing the infrastructure.

Germany has the largest national railway market in Europe, has applied procurement (partly in competition) of regional passenger traffic for the past 15 years and has had deregulated long-distance traffic on a commercial basis and more operators than the rest of Europe combined, also for the past 15 years. Germany has a railway sector that is in several respects highly deregulated and exposed to competition but the European Commission does not consider that the EU's demands for measures as stated in the first railway package, among other things for an independent infrastructure manager, have been met.

The separation of infrastructure and operators has not been implemented in the same way in Germany as in Sweden for example. The Deutsche Bahn (DB) Group is majority-owned by the German State. Through DB Mobility and Logistics it provides passenger services as well as freight transport and logistics. The Infrastructure part of the group is responsible for track and traffic management, stations, power supply

This group structure has been criticised by both the EU and the German Monopolies Commission. The German Ministry of Transport, on the other hand, considers that with DB’s group structure Germany meets the demands regarding separation of infrastructure and operators. This belief is also supported by DB, who claim that the German (DB’s) group structure has several advantages compared to other countries' structures.
In the same way as in Sweden, anyone can operate traffic on DB's infrastructure and in general also on others’ tracks. Unlike other European countries Germany has almost 400 railway operators of varying size and structure, 70 of these operate regional/local passenger services.

When DB’s infrastructure capacity is distributed, the following priorities must apply: 1) Train traffic according to a regular interval timetable, 2) International trains, 3) Freight trains and 4) Other trains.

Operators can enter into framework agreements lasting several years in fixed five-year periods; this system is by many regarded as inflexible and is very controversial. The priority rules in daily train operation are also controversial; different organisations have different views and the legal position is uncertain.

A German ordinance states that Performance or Bonus/Malus agreements to minimise disruptions and increase the railway system’s performance shall be included in the track access charges. The actual amounts, however, are at present very small in relation to the track access charges and these agreements are the subject of constant discussion.

Access to vehicles is an unregulated area but several organisations maintain that the allocation of infrastructure capacity and vehicles are linked together for new operators – a new operator must be given capacity information several years in advance in order to be able to order vehicles several years in advance. According to EU and German legislation, workshops are a service that is to be provided to the operators. In 2010, some workshops owned by DB were forced by the regulator to offer their services according to an open price list. Almost all stations in Germany are owned by DB. Transport authorities and their operators report few problems with the stations themselves (except for high charges) but potential long-distance train operators have complained about certain problems with possibilities to rent facilities for ticket sales.

To summarise, Germany’s railway sector is both more and less “open” than Sweden’s and other countries’ but opinions are divided as to how well or badly the sector functions.

2. Europe, Germany and the railways

Any analysis of the European railway sector – for Europe as a whole or for an individual member state – must have the Lisbon Treaty of 2007 and the EU’s transport policy as its starting point. The provisions in the Treaty’s Title VI concern transport by rail, road and inland waterway and deal among other things with better transport safety, the prohibition of discriminatory conditions of carriage, and competition between different modes of transport. It is also stated that the goals of the treaty shall be achieved through a common transport policy.

The EU’s transport policy emphasises that well-functioning transportation is very important for Europe’s companies and citizens. The purpose of the EU’s transport policy is to create
environment-friendly, safe and efficient transportation to promote the inner market and allow its citizens to travel freely in Europe.

As regards the railways, the EU has concentrated on three areas:

- Opening the railway market to competition
- Improving interoperability and safety
- Developing the infrastructure

In the late 1980s the EU began to pay attention to the problems and decline of the European railway sector. A first step in the so-called revitalisation of the sector was Directive 91/440 EEC on the development of the Community’s railways. This Directive – a forerunner of the three later railway packages – demanded among other things that infrastructure and operators should be separated, at least from an accounting point of view.

On the other hand, the EU has recently pointed out that competition in the railway sector is developing in widely diverging ways in the member states and that the regulatory agencies are not functioning independently and objectively enough (Railway Gazette International, March 2011). Cabotage is permitted in international passenger traffic in different countries but difficulties have been reported, mainly from Italy. It can be expected that demands made of the regulatory agencies will be tightened up and mandatory opening of the markets for domestic passenger traffic will be proposed.

Germany has:

- the largest national railway market in Europe,
- applied procurement (partly in competition) of regional passenger traffic for the past 15 years
- deregulated passenger and freight traffic for the past 15 years
- more operators than the rest of Europe combined – including some working in Sweden.

Germany’s railway sector thus seems to be quite deregulated and exposed to competition. This report aims to describe in more detail how competition has functioned – how is it functioning formally and in the opinion of various players? What do evaluations and the trade press indicate? What is good and what is not so good?

In 1994 Germany implemented a reform of the railways with the purpose of

- Attracting more traffic to the railways
- Limiting support to the sector from the public purse
- Promoting competition on the tracks
- Restoring the state railways’ operation according to business principles.

The reform also involved amalgamating the earlier railway administrations in East and West Germany (Deutsche Reichsbahn and Deutsche Bundesbahn, respectively) into Deutsche
Bahn (DB); more details can be found below. In connection with the reform, responsibility for regional train traffic was decentralised and transferred to the federal states.

More than a decade after the beginning of the reform the sector’s development seems in line with the objectives of 1994\(^1\). The developments described below refer to the period from 1994 to 2008.

- Railway traffic has increased; passenger traffic by 27%, freight traffic by 64% (passenger-km and tonne-km, respectively). Regional passenger traffic has increased strongly. Long-distance traffic has stagnated.
- Support from public funds has stabilised in nominal terms
- The railway’s market share has improved marginally by a few thousandths
- Competition has increased in procured regional traffic and in freight traffic where operators other than DB today have 12% and 25% respectively of the traffic measured as passenger-km and tonne-km, respectively. (20% of passenger train-km are operated by others than DB).

The Ministry of Transport considers that the reform was viewed from the outset as a long-term process that is still continuing and developing; this also means that the railways’ conditions in Germany are constantly changing.

Other organisations, on the other hand, have differing opinions. A few examples supplied by BAG-SPNV:

- The Parliament’s (Bundestag’s) “Traffic Committee”: A lot has happened but considering the funds invested the quantitative results are paltry.
- The coalition parties CDU and CSU state Government Policy 2009-2013 (Regierungsprogramm) that the railway’s market share has not grown as much as was desired. The reforms including privatisation of the operating branches should be completed but the infrastructure remain in public ownership.
- Handelsblatt (Germany’s equivalent to the Wall Street Journal) considers the goals to have been achieved poorly with the exception of the increase in regional passenger traffic. The need for public funding with regard to infrastructure maintenance and reinvestment will increase rather than decrease.
- BAG-SPNV (the German Association of Regional Passenger Rail Authorities): The reform has only been partly implemented. It was correct to decentralise the responsibility for regional train traffic, as evidenced by the increases in traffic. The organisation of the railway as a system must however be developed, in particular as regards track, stations and fee principles.

The Monopolies Commission’s views and recommendations are found in Section 5.

The question of whether “the German railway reform model” or any other rail model has been successful is too great to be dealt with in this report. Two recent reports should nevertheless be mentioned;

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\(^1\) Interview with Bundesnetzagentur on 1 July 2010, e-mail from Bundesnetzagentur on 18 Nov 2010, e-mail from the Transport Ministry (BMBVS) on 8 Dec 2010.
In a paper by Nash et al. 2011 a comparison is made of the experience of the three
European countries with the greatest experience of passenger rail service franchising –
Britain, Sweden and Germany. All three countries have seen improved services and strong
traffic growth, but Britain appears to have suffered most from cost increases while the
German system seems to operate at the lowest subsidies and fare levels.

Another benchmarking and comparison of reform models has been carried out in a British
report “Realising the Potential of GB Rail” (2011), also referred to as the McNulty report.
Comparisons have been made of the British, Dutch, French, Swiss and Swedish reform
models focusing of how rail costs in a wide sense have developed. One important
conclusion of the report is that the benchmarking has revealed a 40% British efficiency gap
against the four European comparators - measured as whole system costs per passenger-
km. Germany was not included in the comparison but German cost reductions through
competitive tendering are mentioned.

3. Germany’s railway sector

3.1 Overview

The separation of infrastructure and operators has not been implemented in the same way in
Germany as in Sweden for example and more variants can be found in other EU member
states. The Deutsche Bahn (DB) Group is fully owned by the German State and consists of
the following divisions:

DB Mobility Logistics consists of; Passenger services – Long-distance services (DB
Fernverkehr), regional services (DB Regio and DB Arriva). Freight transport and logistics –
DB Schenker Rail and DB Schenker Logistics.

The infrastructure functions are also within the DB Group – track and traffic management
(DB Netz), stations (DB Station&Service), power (DB Energie)

The overwhelming part of rail infrastructure in Germany is an integral part of the DB Group.
The European Commission does not consider that Germany has fully implemented the first
railway package, including Directive 2001/14. Ten years after its publication in 2001 and
despite several reviews, reports and a so-called reasoned opinion, several member states
have not fulfilled their obligations as regards this part of the European railway sector’s so-
called revitalisation. The Commission has mainly criticised the infrastructure managers’
independence, inadequate track access charge systems and the lack of an independent
regulatory agency. According to the Commission, these shortcomings constitute obstacles to
entry to the market and insufficient transparency as regards access conditions. This in turn
means that the realisation of a uniform European railway market is prevented.

In June 2010 the EU therefore initiated proceedings (IP/10/807) against Germany (and a
number of other countries) before the European Court of Justice. According to the
Commission Germany’s shortcomings are:
• Insufficient safeguards to guarantee the independence of the infrastructure manager from the railway holding and its transport affiliates in the exercise of the essential functions
• Insufficient incentives for the infrastructure manager to reduce costs and level of access charges
• Infrastructure charges are not based on direct costs of train services and there is insufficient verification whether the market can bear the charges

Germany however considers that it has formally met the EU’s demands as set out in the first railway package\(^2\). The Ministry, on the other hand, maintains that better competition in the railway sector is desirable and changes in the regulatory ordinance are being prepared. The Ministry also mentions the long-term ambition to both privatise DB’s transport and logistics operations (DB Schenker Rail and others). The outcome of the process in the Court of Justice is at present not known (June 2011).

In 2007 and 2011 DB commissioned comparisons of the opening of the railways in the EU member states from the IBM Corporation, known as the IBM Liberalization Index. Several indexes were drawn up, for “judicial” and “actual” market opening, for passenger and freight traffic separately and combined. In all cases, Germany is ranked second after either Sweden or Great Britain.

Also of relevance is the Commission’s “1st package recast” (COM(2010) 475) that aims to create a more efficient European railway sector, among other things by increasing competition on the tracks. The Commission has later announced that a proposal for an opening of national passenger rail markets is planned. A more detailed description of these initiatives, however, is outside the scope of this report.

Unlike other European countries Germany has almost 400 railway operators of varying size and structure, including so-called Nichtbundeseigene Eisenbahnen, (NE). Some are exclusively operators; others are both operators and infrastructure managers. There are also NEs which only act as infrastructure managers, e.g. maintenance workshops, terminal or port operators.

Ownership of NEs varies – wholly private, municipal, federal state owned or subsidiary of the DB Group. There are some 70 operators of regional/local train services (BAG-SPNV website). In general all infrastructure managers must allow access to interested third parties (AEG § 14). An exception applies for infrastructure managers who use their rail infrastructure solely for their own freight traffic.

3.2 Important organisations in Germany’s railway sector

BAG-SPNV, Bundesarbeitsgemeinschaft Schienenpersonennahverkehr, is a cooperation organisation for all procurement bodies in regional/local railway traffic, “Train PTAs”, in Germany. The Swedish equivalent is the Swedish Public Transport Association.

\(^2\) E-mail from Ministry of Transport (BMVBS) 8 Dec 2010
BNetzA, Bundesnetzagentur, is the Federal Network Agency for market and competition matters, among other things in the railway sector. In an article in Railway Gazette International, Sep 2010, the Director of BnetzA’s Rail Regulation Division, Karsten Otte, describes the agency’s tasks and singles out a number of prioritised areas for action:

- Transparent descriptions of railway networks
- Improved conditions in framework agreements
- Transparent access conditions for maintenance facilities
- Access to operation management centres for operators other than DB

EBA, Eisenbahn-Bundesamt, is the Federal Railway Authority. The Swedish equivalent of BNetzA and EBA is the Swedish Transport Agency. EBA is responsible for:

- Traditional railway inspectorate functions
- Accident investigations
- Licensing and safety certification
- Approval of rolling stock and infrastructure constructions
- Approval of rail infrastructure investment plans
- Granting of federal support for the integration of rail with other modes of transport

VDV, Verband Deutscher Verkehrsunternehmen, is the Association of German Transport Companies - mainly representing train and bus operators and some rail infrastructure managers. The Swedish equivalent of VDV is the Association of Swedish Train Operating Companies and the Swedish Bus and Coach Federation.

The Monopolies Commission answers directly to the federal government. One task that is pointed out in particular (AEG § 36) is to report to the federal government on the competition situation in the railway sector every two years. See also Section 5.

### 3.3 Relevant German legislation, etc

In this report references are made to

AEG Allgemeines Eisenbahngesetz, the General Railway Law  
http://www.jusline.de/Allgemeines_Eisenbahngesetz_(AEG)_Langversion.html

EIBV Eisenbahninfrastruktur-Benutzungsverordnung, the Ordinance on infrastructure utilisation  
http://www.jusline.de/Eisenbahninfrastruktur-Benutzungsverordnung_(EIBV)_Langversion.html

SNB Schienennetz-Benutzungsbedingungen, DB’s Network statement  
3.4 Infrastructure and services

Even though Germany has several hundred infrastructure managers, DB Netz’s infrastructure and conditions for operating traffic on DB Netz are totally dominant in discussions in Germany. The description of infrastructure and operators therefore refers to DB Netz from here on unless stated otherwise.

It should be mentioned in this context that German track access charges (here DB Netz’s charges) are considerably higher than for instance in Sweden. A 300-ton passenger train pays 5 € per train kilometre in Germany (“normal main line”, category F2) and approximately 0,30 € in Sweden (2010 figures). Discussions and demands concerning infrastructure quality are also more intense in Germany than in Sweden - this is commented on below. There are also special station charges per stop, differentiated according to class of station and federal state.

Long-distance traffic may be operated by all operators who have a licence and a safety certificate. Operators other than DB today account for less than 1% of the total number of passenger-kilometres but new entrants are on their way. Long-term capacity distribution in combination with investments in rolling stock are considered to be major obstacles to access for new operators (see below).

Regional train traffic (Schienenpersonennahverkehr, SPNV) refers only to traffic that is mainly city, suburban or regional traffic. In dubious cases, the term refers to traffic with journeys predominantly of less than 50 km or of less than 1 hour in duration.

The funds (at present approx. 6 800 million € annually) were distributed to the federal states in 1996. The states procure regional train traffic either through direct procurement or through competitive tendering. Traffic operated by companies other than DB currently has a market share of 12% measured in passenger-km³ (20% measured in train-km). The federal states have chosen different organisational models. Bayern, for example, with 1/6 of Germany’s total train-km in regional traffic has only one procurement body while others have divided responsibility over several smaller bodies. All in all, there are about 30 procurement bodies in the 16 federal states, "Train Passenger Transport Authorities (Train PTAs)", that are represented on the federal level by BAG-SPNV.

Germany thus has a nationwide system of Train PTAs. On the other hand, there is no national system of PTAs for regional/local public transport in general like that in Sweden. In some cases train PTAs are also responsible for other public transport while in others responsibility lies with other regional and/or local bodies. Customers, however, seldom need to be confronted with this complex organisation – in almost the whole of Germany ticket and travel pass systems exist in the same way as in Sweden for all regional/local public transport within a region regardless of operator.

It is also worth mentioning that scheduled long-distance bus traffic is in principle not permitted in Germany. Exceptions are cabotage journeys by bus in international traffic and for historical reasons bus traffic in the previous “corridors” between former West Germany

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3 Figures provided by BNetzA
and Berlin. Liberalisation has been promised but no proposals have been put forward as yet (May 2011).

4. Current issues

The issues below are dealt with in other sub-projects focusing on Swedish conditions. They were therefore considered to be of interest for further investigation by means of interviews with the three organisations BAG-SPNV, BNetzA and VDV and by studying a wide range of reports etc. The responses from the interviewed organisations have been interwoven in the following. In certain cases an organisation’s point of view is given separately.

4.1 Capacity distribution, including framework agreements

Framework agreements can be entered into according to Article 17 of EU Directive 2001/14 and German legislation (AEG § 14a) permits framework agreements to be entered into for a maximum of five years in normal cases. A framework agreement does not specify train paths to the minute, only a certain number of train paths per hour. In a framework agreement, at most 75% of the available capacity per hour may be distributed; other operators have to be content with the remainder. Framework agreements shall as a rule cover fixed five-year periods: 2005 – 2010 – 2015 – 2020. If an operator commences a framework agreement in 2012 it will thus nonetheless run until 2015. An overview of the distribution principles can be found in Appendix 1.

BAG-SPNV⁴, for example, does not consider five years to be sufficient to guarantee that a new operator who has invested in new rolling stock can be sure that it will be able to operate to traffic for the rolling stock lifetime. Longer framework agreements (maximum 10 years), may be entered into, for example for reason of investments in rolling stock, but this requires approval by BNetzA. Only very few such agreements exist at present (2011) but a number of applications have been submitted. Agreements of longer duration (> 10 years) are possible but only for traffic on special infrastructure, high-speed lines for example. BNetzA has drawn up special guidelines for agreements of longer than 5 years.

Other problems concerning framework agreements and capacity distribution in general have also come to light; two new IC operators, Keolis and Locomore, applied for framework agreements for the same section but DB Netz considered that there was only sufficient capacity for one of them. DB Netz therefore gave the train paths to Keolis since it intended to operate traffic on a longer section (a prioritisation in accordance with EiBV § 9 (5) 1). According to press information (RGI May 2010) Keolis later withdrew its application.

Locomore then applied for a framework agreement with DB Netz for a shorter period than five years (a so-called aperiodic framework agreement) but DB Netz refused, saying that the application had been submitted too late. Following an appeal by Locomore, BNetzA decided that this was wrong and ordered DB Netz to give Locomore so-called residual capacity for a shorter period than five years, under penalty of a fine of 50,000 € (Decision 29 April 2010).

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⁴ E-mail, 2 Feb 2011
Locomore in turn withdrew its application and according to its website is planning to begin services in autumn 2011.

Discussions on framework agreements, in particular so-called aperiodic framework agreements, are continuing in Germany. Train PTAs may enter into framework agreements that are independent of whether the operator changes during the period of the agreement. This, however, is unusual; only five Train PTAs have so far entered into five-year framework agreements and one agreement runs for 12 years. Unlike in Sweden, Train PTAs do not make any substantial investments in stations. Some investments are made by the federal states; others are made by DB Station& Service and are then reflected in higher station charges.

According to EIBV § 9, the following 4 priorities shall apply when distributing capacity:

- traffic according to a regular interval timetable
- international trains
- freight trains
- other trains

It should be observed that almost all passenger traffic in Germany is operated according to regular interval timetables; in practice there is a national system for (DB’s) long distance IC traffic and regional systems in every federal state.

This order of priority was different a few years ago and there may be some conflicts between the old and the new order. On the high-speed routes DB Netz has stated that (roughly) passenger trains shall have priority during the day and freight trains at night (SNB 3.4.6).

BAG-SPNV say that it is no great problem for Train PTAs to get the capacity they want but the matter is under constant discussion. However, if the EU demands higher priority for freight trains, the situation may change and new conflicts arise. It should be observed that a number of European freight corridors have been established in a Regulation that is directly binding for the member states. As a rule there is no shortage of capacity on DB Netz. Capacity problems exist only at certain major nodes and on a small number of routes. According to DB Netz’s network statement 2010, only two sections have been declared to be overloaded: sections of the Mannheim – Basel and Fulda - Frankfurt main lines. A small number of sections will be added to the list from 2011.

Prior to the discussions in Germany, possible framework agreements in Sweden were sought. Västtrafik (formerly GLAB) has a framework agreement with the former National Rail Administration that guarantees the PTA four train paths an hour between Gothenburg and Kungsbacka at peak traffic times. This agreement came into force in 1992 and applies without any time limit. Similar agreements probably exist for Stockholm Public Transport (SL) and public transport in the Skåne region (Skånetrafiken).
4.2 Priorities in daily train operation

According to BAG-SPNV and BNetzA\(^5\), rules in this area are unclear, procedures varied and diffuse, and opinions divided.

BNetzA's opinion is that the order of priority for capacity distribution should also apply in daily traffic but the legal support for this is vague. There is little point in maintaining that trains that run according to a regular interval timetable shall have priority since almost all passenger trains in Germany, both regional trains and ICE/IC, run according to regular interval timetables. By purchasing an express train path with high access charges \(\text{Expressstrasse}\) an operator can get the highest priority but this is not always applied in practice. On high-speed lines, DB Netz has declared that (roughly) passenger trains have priority during the day; in Berlin and at some other nodes special contingency plans exist for disruptions.

VDV's members (mainly operators) have different opinions. Some consider that trains that run according to regular interval timetables shall have priority while others agree with DB Netz that disruptions should be dealt with as quickly as possible; it might for example be appropriate to allow an ICE to go first since it is faster and has fewer stops. Several, but not all, feel that the rule “trains on time shall have precedence over delayed trains” shall apply.

In summary, DB Netz, operators through VDV, BNetzA and Train PTAs feel that clearer rules and routines are particularly desirable.

4.3 Bonus/Malus Agreements (BMA) between infrastructure managers and operators

Bonus/Malus Agreements (BMAs), or performance regimes, shall form part of the charges, both pure track access charges and charges for stations and other services (EIBV § 21). The infrastructure managers shall take the initiative as regards BMAs. BNetzA can not have any opinion of its own as to how a BMA is to be formulated; it can only act if a BMA contravenes legislation, for example as regards discrimination of operators. Legislative regulation is sparse (EIBV, §§ 10, 21). BMAs have mainly been developed by DB Netz (SNB in particular sections 6.2.2.1.3 and 6.2.3.7).

The aims of BMAs are considered to be to minimise disruptions and increase the railway system's performance, not to compensate “end-customers” for delays, for example. Considering that both parties have rights and obligations, the penalty or malus (poor performance) compensation shall correspond to the costs or inconvenience that one party causes another. At present, DB Netz’s BMAs specify a fine of 10 cents per minute’s delay with a ceiling for all operators on DB Netz of 10 million minutes = 1 million € per year. This is to be compared to the total track access charges paid to DB Netz of 4 000 million € a year. In addition to poor performance penalties, operators can be paid special compensation by DB Netz if the infrastructure does not come up to the agreed standard or level of accessibility (EIBV § 21.6).

BMA-related questions are the subject of great interest in the German railway sector and, just as in Sweden; the question of who is to blame is discussed in detail when disruptions

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\(^5\) Interviews on 30 June and 1 July 2010.
occur. VDV has had a working group for these matters with members from operators, DB Netz, BNetzA and VDV. VDV report 9036 claims for example that:

- the handling of today’s BMAs is costly and complicated
- reporting and transparency with regard to causes of delays are deficient
- operators are treated unequally
- bonus and malus are not separated with regard to time of day, track class or type of train.

The VDV report maintains that the sector must develop simpler measurement methods, better ways of establishing the root causes of delays and simpler ways of handling payments streams. It is probably not possible to create a BMA for the whole of Germany; even within DB Netz the infrastructure and traffic operation conditions are so different that several BMAs are needed. More detailed proposals for BMAs (that have yet to materialise) must also be firmly established in the operators’ traffic operation and commercial conditions.

4.4 Access to rolling stock

This area is not regulated at all. New IC service operators have encounter problems: Keolis planned to use French vehicles and Locomore Austrian vehicles – both abandoned their plans in Germany for the present (see Section 4.1). Locomotives can often be leased from the manufacturers or companies linked to them; a new and growing market with increasing international standardisation. DB has not been in the habit of selling rolling stock to potential competitors but reports that freight locos are now sold to others. Among the British leasing companies Angel Trains has established itself on the continent but still plays only a limited role in passenger traffic. Leasing in the freight sector, both locomotives and wagons, has been more common than in passenger traffic for a long time.

In regional train traffic Train PTAs normally require bidders to offer vehicles according to specifications in the terms of the tender. Exceptions are Niedersachsen and parts of Hessen that have vehicle pools owned by Train PTAs in a similar way as in Swedish PTAs. There is no equivalent to the Swedish PTA-owned company Transitio. A tenderer or bidder must reckon with the risk that his contract will not be renewed (10 years is normal in Germany) and take into consideration whether the vehicles can then be used in other traffic or sold or must be scrapped. (Eastern Europe has become a large second-hand market for vehicles that are considered obsolete in Western Europe.) Alternatively, older vehicles can be offered (at lower prices than new ones) in a tender if they meet the Train PTAs’ demands.

4.5 Access to station facilities, workshops and other service functions

As regards access to stations and their facilities VDV reports few problems in regional train traffic. Most journeys are made using tickets or passes that are valid on several modes of transport and there is little need for premises for selling tickets – ticket machines are also more common than in Sweden and other countries. On the other hand, according to BAG-SPNV there is some discontent with DB Station&Service pricing for stops at stations; this pricing has been changed several times over the past ten years. Some operators have had problems finding suitable premises for selling tickets etc inside the station buildings. Veolia is
reported to have had plans to sell tickets through a Train PTA but refrained because they did not want to get on bad terms with DB.

Access to workshops or maintenance facilities is a considerably more complex area. According to EU and German legislation workshops are a service that is to be provided to the railway companies. There is no equivalent to Swedish Euromaint. DB Regio has 50 workshops but there are more than 100 facilities owned by others. Comparing these facilities to see if they are real alternatives is difficult. Other operators have had problems with the pricing of DB’s services; prices have been set from case to case and transparency has been lacking.

However, BNetzA forced DB Regio with legal action to open their maintenance facilities on a non-discriminatory basis. Other operators have now been assured that they can have services performed by DB at the same prices as DB Regio themselves from 1 October 2010. A price list for work carried out at all of DB Regio’s workshops will be drawn up; this will ensure that all operators have the same terms and conditions.

BNetzA now intends to push this development forward in order to obtain the same terms and conditions from other workshop owners, principally DB Schenker Rail and DB Fernverkehr.

VDV maintained that in regional train traffic there are several maintenance variants (and different opinions among its members):

- Use DB’s workshops on the equal terms and conditions that have applied since 1 October 2010
- Build workshops of their own – with the risk that they will not be able to transfer them to a possible successor when the agreement expires. A shortage of suitable land at reasonable cost in metropolitan areas has also been claimed
- Build workshops with support from Train PTAs; this support must then possibly be repaid (in part) when the agreement expires
- Use the vehicle manufacturers, e.g. Alstom, Siemens or Bombardier, also for maintenance

BNetzA considers that its actions have given the operators the possibility to choose which of the above alternatives they prefer for their vehicle maintenance.

4.6 The seamless journey in a multi-operator environment

Information

Timetable information is available on DB’s website www.bahn.de (also for mobile apps) where travel chains can be sought between practically all stations/stops and street addresses in Germany and between almost all railway stations in Europe. BNetzA has demanded that DB provide other train operators with information but not PTAs information. Other operators currently pay for this service but not PTAs. On the other hand, DB is not obliged to provide price information for other operators/PTAs.

6 Information from Linda Gerlach, DB; Arne Beck, Civity Consulting; Jürgen Ross, VBB Dec. 2010
Ticket purchasing

The Cityticket concept means that a journey with DB is combined with a local journey at the point of origin and/or destination in approximately 120 towns and cities. The journey is purchased through DB who pays the PTA or the local operator for their portion of the journey. DB has different agreements; in most cases payments to the cooperating operators or PTAs are not made per journey but as an annual lump sum. DB may be considered to have a dominant position but from the customer’s point of view Germany must be said to be ideal for public transport travellers, among other things as regards ticket selling. Purchasing of through-tickets on the internet is still not as developed as in some other countries but DB’s and PTAs’ machines offer a wide range of tickets, including the possibility to purchase Citytickets are very widespread and can also be found for example at airports and in other “non-railway environments”. German PTAs also have ticket machines to a much greater extent than in other countries.

BNetzA points out that NEs are strongly discontented with the dominant position of the DB train operators with regard of the cooperation concerning nation-wide ticketing services. Since the perpetuation of a nation-wide ticketing is legally intended (AEG §12) all train operators have to cooperate with the DB train operators, since they are the only nation-wide operators. This cooperation is not an object of regulation by BNetzA, however.

4.7 Distribution of responsibility between Train PTAs and operators

Train PTAs have chosen different solutions as regards for example freedom to determine fares, timetable design, vehicle design, etc. Net agreements are the most common type but mixes of net and gross agreements also exist where the revenue risk is shared by the operator and the Train PTA. If the Train PTA wishes to establish both fares (e.g. common fares for all public transport in a region) and (regular interval) timetables for better coordination with other traffic, this obviously reduces the bidders’ room to manoeuvre. In addition, German competition legislation prohibits too high risk margins when tendering.

Decentralisation, forms of procurement and contracts and generally high volumes have attracted a great deal of attention in the European transport sector and the research community and several papers and reports take up various aspects. A few examples:

As mentioned earlier, both direct procurement and competitive tendering occur – policies vary between the federal states. According to a Swiss report by Lalive and Schmutzler (2007) 50% of the total train-km was tendered out in Schleswig-Holstein in 2007 but only 5% in Bayern.

Link and Merkert (2010) state that different German administrative courts decided in 2002 that Train PTAs would procure traffic in competition and not through direct procurement. The courts based their decision on the competition legislation. The decision led to intense discussions and lobbying by DB Regio who would really have liked to see that direct procurement continues. DB Regio appealed both to higher authorities in Germany and to the European Commission. A gradual phasing-in over 13 years was discussed and a compromise was eventually agreed where the federal states are forced to show greater
transparency in their procurements, while legal proceedings concerning the forms of procurement care still on-going.

It should be noted that EU Regulation 1370/2007 permits direct procurement of train traffic (but not bus traffic).

5. The Monopolies Commission’s recommendations

According to AEG § 1 German railway legislation shall promote an attractive traffic supply through active and “unfalsified” (unverfälschten) competition within the railways. The Monopolies Commission, an independent advisory body to the federal government, must report every two years on the status and development of the competition situation (AEG § 36).

The Monopolies Commission can only recommend changes while the Bundesnetzagentur can enforce changes. However, the Monopolies Commission is a kind of consulting council to advise the German government and can therefore recommend changes in legislation while the Bundesnetzagentur can only enforce current law.

In its 2009 railway report the Commission declared that competition in the German railway sector was developing slowly and recommended that the government take consistent action to create stable, fair conditions for competition. DB’s operative divisions should be privatised which would secure DB Netz’s independence and eliminate many risks of discrimination. More transparency is needed in various business relations between DB Netz and different operators.

The Commission also declared that when framework agreements of several years’ duration are entered into, the operators should be informed of the available capacity at least two years before services begin, thus giving new operators a satisfactory planning horizon. Framework agreements should not have the present fixed terms of duration of 5 and 10 years but should in all cases be approved by BNetzA.

The federal states should extend procurement of SPNV in competition; even if EU Regulation 1370/2007 permits direct procurement, direct procurement is generally to DB Regio’s advantage. – New operators have increased their market shares in SPNV but their real freedom to set fares is not entirely clear. A dependence on DB’s fares has been found and this should be avoided.

Incentive agreements (BMAs) between infrastructure managers and operators should be developed. All agreement on track access charges, track concessions and similar should be reviewed to increase transparency, reduce the possibility of discrimination and facilitate BNetzA’s scrutiny.

Long-distance bus traffic should be deregulated. Just as several other European countries Germany’s long-distance bus traffic is strictly regulated7. In practice it is only possible to

7 3 Aug 2011 the German Govt. announced a liberalisation of long-distance bus services from 2012
travel by long-distance bus to and from Berlin in the “corridors” to former West Berlin and for cabotage passengers to travel on buses in international traffic. The Monopolies Commission considers that the railways should devote themselves to traffic where it is most appropriate; this is evident only in competition with long-distance bus traffic.

Finally, the Commission feels that the Federal Ministry of Labour and Social Affairs should not involve itself in salary and employment agreements for regional train traffic as this might counteract competition.

6. Deutsche Bahn’s comments

DB’s position and procedures have been questioned by various stakeholders. It was therefore considered appropriate to ask for DB’s opinion concerning the areas below. DB’s response\(^8\) in German has been translated and slightly shortened by the author. Some of the background information provided in DB’s response can be found in other sections of this paper.

- Capacity allocation through framework agreements, Rahmenverträge. Several stakeholders find the fixed five-year periods unacceptable. What can and will DB do about this?

DB: Framework agreements are a suitable and proven instrument to provide planning security and should therefore be retained. The normal five-year period gives all parties concerned sufficient legal and planning security. Longer periods are possible in special cases after the approval of the Regulator (BNetzA), (AEG 14 a, Abs.2). - Framework agreements do not mean the allocation of a certain train path “to the minute” merely a certain “path band”. According to EIBV only 75% of the available capacity may be allocated in framework agreements, the rest must be kept for occasional services.

- Bonus/Malus agreements – some operators and SPNV-Aufgabenträger think that the “cap” of 1 million € per year makes such agreements meaningless. How can this be developed?

DB: The Bonus/Malus agreement system satisfies the legal requirements. The payments concern a performance-related part of the access charges intended to incentivise the reduction of disturbances and improve infrastructure performance. The “cap” is intended to make it possible for all concerned parties to calculate the effects of the agreement system and according to DB to keep the risk within controllable boundaries.

- Priorities in daily operations – which train (category) shall have priority?

DB: According to EIBV, capacity allocation (distribution of trains paths) shall, be done in the following order of priority (see also Appendix 1);

- traffic according to a regular interval timetable

\(^8\) E-mail from Cristoph Lerche DB 14 March 2011
- international trains
- freight trains
- other trains

There are, however, no strict priorities when dealing with disturbances in day-to-day operations. Returning to normal operation is always of the highest importance and too strict rules may prove counterproductive.

- The separation of the infrastructure (DB Netz) from the Railway Undertaking/Operations and the EC’s Referral to the Court of Justice concerning the 1st Railway Package

DB: The present set-up with DB Netz and DB’s operating divisions ensures a separation in the legal, organisational and accounting sense. Any interference from the operating divisions over DB Netz’s capacity allocation or access charges is out of the question. Also, the EC’s recast proposal does not question the integration of infrastructure and operations.

DB states that there is no empirical proof that a separation will benefit the development of rail services, customer benefits or the development of competition. Instead, an integrated railway under strict regulation of market conditions such as in Germany may show positive developments. Developments in other countries (UK, Slovenia, the Czech Republic) show that despite a separation there is little development of competition and an increase in demand for public funding.

The European Commission (EC) criticises Germany for not having sufficiently proved that DB Netz can function independently from the DB Holding (for details see Section 2). DB claims that this criticism is unsubstantiated; German legislation (AEG §§ 9, 9a) assures the required independence of the infrastructure manager and the European legal requirements are therefore fulfilled. Germany therefore fulfils the European requirements. DB Netz’s contractual arrangements with the holding guarantee that decisions about capacity allocation and access charges are made in an independent way with no interference from the operating side. This also concerns staff – they are forbidden to pass on any sensitive information between the various holding functions.

- Deregulation of long distance bus services – foreseen by the German Government.

DB: Long distance bus traffic in competition with existing rail services is already permitted and possible. According to a decision in the Supreme Administrative Court (Bundesverwaltungsgericht) on 24 June 2010 long distance bus traffic can be permitted also when the line is served by rail – if the bus fares are clearly lower than the corresponding rail fares. However, in 2011 a change in the long distance bus legislation is foreseen, the federal government will implement a liberalisation through changes to the Passenger Transport Law (PBefG). Basically DB finds a long distance bus network suitable when it complements the long distance rail services. Certain regulatory measures to protect customers and staff are in order, however:
Licensing should be obligatory for bus services in order to guarantee customers the present levels of safety and quality in German passenger transport. This is an important prerequisite for the monitoring of necessary minimum standards.

Service obligations are also needed. Competition from companies who are under no obligations to operate scheduled services and may cancel services as they like will endanger efficient local public transport operations. The publication of timetables valid for a certain advertised time is also absolutely necessary for reliable customer information.

7. Concluding opinion

Despite the differences in traffic volumes, Germany’s and Sweden’s railway sectors share some common characteristics; there is a common view that allowing several operators to use the infrastructure is to the railways’ advantage and that various obstacles to access should be reduced. Sweden and Germany are also at the top of IBM’s Rail Liberalization Index. Traffic volumes have increased in both countries, as has the railways’ market share to some extent. Responsibility for regional train traffic has been decentralised to federal states and counties respectively. Unlike in many other countries there is a developed cooperation between trains and buses with common ticket systems etc. Jernhusen in Sweden is largely equivalent to DB Station & Service but it is uncommon in Germany for stations to be owned by others, e.g. Train PTAs.

In some areas Germany appears to have advanced further than Sweden. The legislation requires the regulatory agency BNetzA and the Monopolies Commission to have certain regulatory and scrutinising tasks even if BNetzA maintains that the regulatory framework is still unclear in several areas. One example of a measure that can be mentioned is how BNetzA forced DB Regio to open up its workshops in a non-discriminatory basis and draw up an open price list for vehicle maintenance that applies equally for all operators. Germany has no real equivalent to Swedish Euromaint; workshops that belong to DB’s divisions are predominant but there are several independent maintenance workshops.

In both countries, however, some things are unclear in several important areas, for example principles for allocating capacity, priority in daily train operation and BMAs. Access to vehicles is not regulated in either Germany or Sweden. Nonetheless the Monopolies Commission takes up the rolling stock issues in its 2009 railway report. The commission claims that a new operator, in particular in long-distance traffic, must order new vehicles several years before beginning services and at the same time be assured of train paths for several years, perhaps up to as many as ten.

One crucial difference is of course that Germany persists in keeping the main infrastructure in the DB Group and the Ministry does not feel there is any reason to change this. Similar “group solutions” can be found in other countries but would probably be inconceivable in Sweden, even though such ideas were put forward during the 2010-2011 winters. DB also has some common functions, such as the www.bahn.de information system and offers through ticketing involving long-distance and local services (Cityticket). Since Train-PTAs and NEs mainly offer regional services they have to cooperate with the incumbent to be able
to offer nation-wide services. In Sweden the information functions are the responsibility of jointly owned Samtrafiken while tickets are sold by various train operators and others. Few other countries have similar arrangements.

Long-distance scheduled bus traffic in Germany is at present subject to a thorough examination of terms and conditions (with the exception of traffic to and from Berlin). A liberalization proposal has been announced for 2011; it remains to be seen whether any suitability appraisal, licence or similar will be required.

In summary, the most important obstacles to competition can be said to be (in descending order):

- The principles for capacity distribution, in particular as regards framework agreements of several years' duration
- Insufficient BMAs where handling costs exceed profits with such agreements
- Access to workshops (now improved to a certain extent through action taken by BNetzA)
- Access to station facilities – only dealt with in outline in this report
- Priorities in daily train operation are not clearly regulated
- DB’s structure with infrastructure within the group is considered by several parties (but not the Ministry or DB) to be a serious obstacle to competition and an obstacle to development in general

Germany’s railway reform is described by the Ministry as a continuous process while deregulation is Sweden has been described by as “accidental”. (Alexandersson, 2010). Great Britain has chosen a totally different reform model that has been described in detail in several reports and articles. In summary, we can say that even though the EU’s fundamental requirements concerning the railway sector are the same everywhere in Europe, there are numerous organisational variants, financial demands, access conditions, etc. The EU is now trying to exert pressure on the member states to really implement the reforms decided by the Union through the complaint made to the European Court of Justice that was mentioned earlier and through the so-called 1st package recast. There is now good reason to proceed with deeper studies of what the various models have accomplished as regards revitalisation of the railways.

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Acknowledgements

**Interviewees**

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<thead>
<tr>
<th>Name</th>
<th>Institution/Role</th>
<th>Date</th>
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<tbody>
<tr>
<td>Arnd Schäfer</td>
<td>BAG-SPNV</td>
<td>30 June 2010</td>
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<tr>
<td>Axel Müller</td>
<td>BNetzA</td>
<td>1 July 2010</td>
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<td>Wolfram Krick</td>
<td>BNetzA</td>
<td>1 July 2010</td>
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<tr>
<td>Ulrike Weyers</td>
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<tr>
<td>Florian Röttger</td>
<td>BNetzA</td>
<td>1 July 2010</td>
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<tr>
<td>Heike Höhnscheid</td>
<td>VDV</td>
<td>2 July 2010</td>
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The interviews have been followed up by e-mail questions

**Other contacts**

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<tr>
<th>Name</th>
<th>Institution/Role</th>
<th>Correspondence</th>
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<tbody>
<tr>
<td>Alexander Steinmetz</td>
<td>Monopolies Commission</td>
<td>E-mail responses to questions</td>
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<td>Dept. of Land Transport</td>
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<td>Ludger Sippel</td>
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<td>Nonthi Wehmhörner</td>
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<td>Ian Hutchinson</td>
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<td>Translator Swedish-English</td>
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### Abbreviations

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<th>Abbreviation</th>
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<tr>
<td>AEG</td>
<td>Allgemeines Eisenbahngesetz, General Railway Law</td>
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<td>BAG-SPNV</td>
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<td>BNetzA</td>
<td>Bundesnetzagentur, Federal Network Agency</td>
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<td>DB</td>
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<td>EBA</td>
<td>Eisenbahn-Bundesamt, Federal Railway Authority</td>
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<td>EIBV</td>
<td>Eisenbahninfrastruktur-Benutzungsverordnung, Ordinance on infrastructure utilisation</td>
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<td>NE</td>
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<td>RGI</td>
<td>Railway Gazette International</td>
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<td>SNB</td>
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<td>VDV</td>
<td>Verband Deutscher Verkehrsunternehmen, Association of German Transport Companies</td>
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<tr>
<td>VTI</td>
<td>Statens väg- och transportforskningsinstitut, Swedish National Road and Transport Research Institute</td>
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Appendix  Capacity distribution procedure at DB Netz

Source BAG-SPNV

Applicant A

Applicant B

Apply for simultaneous and conflicting train path(s)

Decision after coordination and negotiation process, EIBV § 9 (3)

Decision acc. to priority rules EIBV § 9 (4);
1) Regular interval services *)
2) International train paths
3) Freight paths

Framework contracts have priority

Decision in favour of the highest access charge to be paid = longest run in Germany EIBV § 9 (5)

Decision in favour of the highest bidder for the path(s) EIBV § 9 (6)

Conflict solved

Conflict solved

Conflict solved

Conflict solved

*) EIBV § 9 (5) states that regional services shall have priority