

Knieps, Günter

Working Paper

Competition and third party access in railroads

Diskussionsbeitrag, No. 150

Provided in Cooperation with:

Institute for Transport Economics and Regional Policy, University of Freiburg

Suggested Citation: Knieps, Günter (2014) : Competition and third party access in railroads, Diskussionsbeitrag, No. 150, Albert-Ludwigs-Universität Freiburg, Institut für Verkehrswissenschaft und Regionalpolitik, Freiburg i. Br.

This Version is available at:

<https://hdl.handle.net/10419/104068>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Competition and Third Party Access in Railroads

by Günter Knieps

Discussion Paper

Institut für Verkehrswissenschaft und Regionalpolitik

No. 150 – August 2014

Abstract:

This chapter is organized as follows: In section 2 the historical roots of third party access regulation are characterized. This includes the Prussian railway law of 1838 and the terminal railroad case of 1912. In section 3 a normative framework, based on modern network economics, for the evaluation of third party access policies is provided. In section 4, the gradual process of market opening for railway transport services and the evolution of third party access regulation in Europe are characterized. In this context the potentials for competition on the markets for passenger rail services and public subsidies are also considered.

Prof. Dr. Günter Knieps
Institut für Verkehrswissenschaft und Regionalpolitik
Universität Freiburg
Platz der Alten Synagoge, 79085 Freiburg i. Br.
E-mail: guenter.knieps@vwl.uni-freiburg.de
<http://portal.uni-freiburg.de/vw>

Die elektronische Version dieses Aufsatzes ist verfügbar unter:
[http://www.vwl.uni-freiburg.de/fakultaet/vw/publikationen/
diskussionspapiere/Disk150.pdf](http://www.vwl.uni-freiburg.de/fakultaet/vw/publikationen/diskussionspapiere/Disk150.pdf)

1. Introduction

The starting point of this chapter is the key role of equal access to network infrastructures for enabling competition on the markets for network services. A general precondition for competition to evolve is the abolishment of legal entry barriers. Only then can the potentials of active as well as potential competition be exploited by entrepreneurial initiatives. As long as network industries such as electricity, gas, telecommunications, aviation and railroads were organized as legally protected public utilities the hierarchical end-to-end control of the whole value chains dominated. Neither competition nor access problems arose. Although network industries have been exempted from competition during most of the 20th century, in the meantime, since the wave of liberalization and the opening of network industries starting in the 1970s and 1980s, competition has become the leading paradigm. Competition in network industries can have many faces. Competition may arise between alternative network infrastructure providers as well as between network service providers. Due to the complementarity of network infrastructure capacities and network services, active and potential competition between different network service providers requires equal access to network infrastructures. If the network infrastructure is a monopoly, the issue of regulatory (mandatory) access has to be solved in order to guarantee non-discriminatory access to network service providers.¹ The role of competition in railroad industries has been a controversial topic since nearly two centuries. Two basic forms of (intramodal) competition within railroad industries can be differentiated: competition among lines (rail-to-rail competition/infrastructure competition) as well as competition on the track. In this context there is also an ongoing debate on the role of mandatory access to railroad infrastructure by means of competition/antitrust policy or sector-specific ex ante regulations. Since in railroad industries the providers of rail infrastructure are traditionally vertically integrated, the concept of mandatory third party access gained particular importance. The question under consideration is under what criteria a specific railroad infrastructure has to be opened for competitors, and if so under what condi-

¹ In the meantime a large body of literature exists, dealing with the regulatory issues of liberalized network industries. For a survey and sector-specific applications, see Köthenburger, Sinn, Whalley (eds.), 2006; Finger, Künnecke (eds.), 2011.

tions. The focus of this chapter is twofold: On the one hand the evolution of competition within railroad industries and on the other hand the evolution of mandatory third party access. As it turns out the institutional design of mandatory third party access plays a key role for the scope and speed of the competition process within railroad industries.

The chapter is organized as follows: In the subsequent section 2 the historical roots of third party access regulation are characterized. This includes the Prussian railway law of 1838 and the terminal railroad case of 1912. In section 3 a normative framework, based on modern network economics, for the evaluation of third party access policies is provided. In section 4, the gradual process of market opening for railway transport services and the evolution of third party access regulation in Europe are characterized. In this context the potentials for competition on the markets for passenger rail services and public subsidies are also considered.

2. Historical roots of third party access regulation

The proper role of mandatory third party access depends on the role of competition. Competition among lines may require mandatory access to complementary infrastructures, competition on the tracks may require mandatory access to complementary railroad tracks. The double function of third party access to infrastructure consists of:

- (1) enabling competition among lines: the Terminal Railroad Case
- (2) enabling competition on the track: the Prussian railway law

2.1. Competition among lines and the Terminal Railroad Case

The Terminal Railroad Case² is of particular importance for understanding the inner logic (telos) of mandatory third party access. Therefore it seems worthwhile to journey back in time to 1911. At that time a large number of competing trunk-line railroads (twenty-four) converged in St. Louis, one of the largest railroad centers in the world. There were three independent terminal railroad companies providing facilities for railroads to cross the river: firstly, the Wiggins Ferry Company, secondly, the Eads Railroad bridge terminal company and thirdly, the Merchant's bridge terminal company. These three independent terminal systems were merged into a single system owned by fourteen independent railway companies, thereby completely controlling all interconnection facilities between both sides of the river which were absolutely necessary for all railway companies who wanted to pass through or even enter St. Louis. However, not all railway companies involved became co-owners of these merged terminal facilities.

According to the Supreme Court mergers of terminals into one single system avoid unnecessary duplication of facilities and therefore should not be forbidden. But since not all railroad companies were owners of the terminal, the Sherman Act did require non-discriminatory access to the merged railroad terminals. As a consequence, the trade-off between granting access to all railroad companies and thus not obstructing competition among lines versus taking into account the property rights of terminal owners had to be solved. Mandatory third party access to complementary monopolistic infrastructure had led to the birth of the Essential Facility Doctrine.

² U.S. Supreme Court, *US v. Terminal Railroad ASS'N of ST. Louis*, 224 U.S. 383 (1912), 224 U.S. 383 *United States of America, Appt., v. Terminal Railroad Association of ST. Louis et al.* No. 386, decided April 22, 1912.

2.2. Competition on the track and the Prussian railway law

The basic concept for allowing competition on railroad service markets based on mandatory access to the tracks dates back at least to the Prussian Railroad Law of 1838. § 27 of this law guaranteed a three-year period of transport monopoly after the opening of a new line; after that, the ministry of trade could grant a concession to rival providers of train services, in order to enable competition on the track. In case the bargaining on access charges between the integrated railroad company and a third party provider of transportation services was not successful, a detailed regulation of access tariffs was specified in §§ 29 and 30. However, the mandatory access prescribed by the Prussian railway law did not have to be applied as long as competing alternative routes for railway services owned by different companies were available.³

Focusing on the European railway systems, according to Sax (1879, p. 148) the evolution of large, increasingly dense railway infrastructure networks and the resulting monopoly power were considered to be inherent in the nature of railways, irrespective of whether private or public companies were involved. As a consequence of the evolution towards a natural monopoly with only one company providing the whole network infrastructure, the question arose whether competition on the track and subsequent third party regulation of track access charges based on the Prussian railway law would provide the adequate instrument. It is interesting to note that important economists and railroad experts were highly skeptical regarding the possibilities of competition on the track. Sax (1879, pp. 113 ff.) considered the role of competition on the track of active providers of transportation services inefficient cost duplication⁴ and technically infeasible.⁵

³ However, there was one example in Prussia in which the threat of competition on the track based on the Prussian railway law became a reality (cf. Fremdling, Knieps, 1993, p. 145).

⁴ “dass der Concurrenzbetrieb eine namhafte Erhöhung der Anlagecapitalien und der Betriebskosten bedeuten würde, und zwar in um so höherem Grade, je mehr Concurrenz vorhanden wäre” (Sax, 1879, p. 116).

⁵ “In der That ist die Verbindung zwischen den drei Transportelementen Weg, Fahrzeug und motorischer Kraft bei der Eisenbahn in Folge deren technischer Natur eine zu enge, als dass sich ein Zerreißen dieses Zusammenhanges in der Verwaltung durchführen liesse” (Sax, 1879, p. 114).

Consequently, Sax did not provide a regulatory framework for access regulation in order to stimulate competition on the track.

Léon Walras, the founder of the theory of perfect competition with a great number of active firms under free market entry in his article “L’État et les Chemins de Fer” (1875/1980) argued in favor of an integrated state monopoly for railways. According to his conviction competition on the track would not be feasible and finally an integrated railway monopoly would result: „With railways ... the track constitutes a natural monopoly and the actual transportation another which is essentially linked to the first, because ... an unlimited number of firms cannot have trains running on the rails. Here the fee for the track, the vehicle and its motive power, the toll and the freight fee, all go to one monopolist” (p. 91). A basic argument for the nationalization of such a railway monopoly would be that private railroad enterprises would reap monopoly profits. The possibility of adequate access regulation, however, was not considered by Walras.

Since the nationalization of Prussia’s railways from 1879 onwards the mandatory third party access rules of the Prussian railway law have never been implemented. A major reason for nationalization beyond military reasons was that railway profits could be used as a substitute for proper taxes in order to finance Prussia’s budget (Fremdling, Knieps, 1993, p. 153). Within the integrated state monopoly – including tracks and services – third party access regulation became pointless.

3. Network economic justification of mandatory third party access

The objective of this chapter is to analyze the role of competition and the remaining need for access regulation in network industries. A network economic justification of mandatory third party access follows from the disaggregated approach of market power regulation in network industries. Train transportation services can only be provided if non-discriminatory access to the railway track infrastructure as well as the system of traffic and safety controls is provided (Knieps, 2006 a, p. 11).

The basic philosophy of third party access policies (antitrust policies and regulations) is that the owner of an infrastructure is obliged to provide non-discriminatory access to competitors on the train transportation markets: Only if vertically integrated industries are involved does the term (mandatory) third party access make any sense. If infrastructure providers are not active in the complementary service markets (e.g. airports), the term (mandatory) open access seems more suitable.

3.1. The essential facilities doctrine as a cornerstone of third party access regulation

The transformation of the essential facilities doctrine from antitrust law applicable case by case into an ex ante regulation context requires a generalization of the concept from case by case towards a network economic concept applicable on the basis of theoretically well-founded criteria. The theory of monopolistic bottlenecks makes comparison between different cases easier, enabling regulatory decisions based on a class of cases and enabling a sharpening of the borders of market power, differentiating which elements are not essential facilities and can thus be provided under competition.

3.2. Localization of network-specific market power

The theory of monopolistic bottlenecks has been developed to derive stable criteria to determine the minimum basis for access regulation (Knieps, 1997, pp. 327-331; Knieps, 2011). Network subparts in which active and potential competition can work fall under the sole competency of the general competition law. Network subparts characterized by a natural monopoly in combination with irreversible costs cause network-specific market power and thus require access regulation. The market power of the owner of a monopolistic bottleneck infrastructure is due to geographical irreversibility (no potential competition) and the subadditivity of the relevant cost function in such a way that only one infrastructure exists in the relevant market (no active competition). This network-specific

market power is stable, so that strategic behavioral assumptions and informational asymmetries do not constitute the roots of network-specific market power problems.

It is important to distinguish between railway infrastructures characterized by competition among lines (rail-to-rail competition) and railway infrastructures characterized as natural monopolies. Competition among lines does not necessarily require a fully alternative railroad track. Two railroads could also compete among alternative (long distance) lines through a terminal switching railroad that they jointly own which switches cars to both railroad lines (Grimm, Winston, 2000, pp. 48 ff.). In the case of active rail-to-rail competition network-specific market power due to a monopolistic bottleneck does not arise. In contrast, due to bundling advantages of different lines a meshed railway infrastructure network possesses the characteristics of a natural monopoly and consequently those of a monopolistic bottleneck (Knieps, 2006a).

3.3. Disaggregated access regulation

Access regulation is only required in monopolistic bottleneck areas due to the absence of active and/or potential competition. Network-specific market power does not allow competitive bargaining on network access conditions. The market power of the owner of a monopolistic bottleneck can be exploited by monopolistic access charges or inadequate access conditions (Knieps, 2006b, pp. 150 ff.).

The monopolistic bottleneck theory neither requires nor excludes ownership unbundling.⁶ In the absence of ownership unbundling mandatory third party access has to be implemented. Ex ante regulation of monopolistic bottleneck infrastructure requires non-discriminatory access and no asymmetric advantage for partic-

⁶ “Under European Union law, it is a ‘last resort’ remedy that is only applicable if other remedies have failed to achieve effective competition, and there is no or little prospect of infrastructure competition within a reasonable timeframe”.^{FN} (OECD, 2013, p. 19).

ular market participants, irrespective of whether the advantage would be granted to a division of a vertically integrated firm or another competitor on the complementary service market. Although airports and airlines, for example, are typically vertically disintegrated in Europe, access regulation to monopolistic bottleneck facilities is nevertheless required to allow undistorted competition on the airline markets. In contrast, in European electricity markets or railway industries the owners of the bottleneck infrastructures are vertically integrated, including a branch providing complementary competitive services.

4. The gradual process of market opening for railway transport services and the evolution of third party access regulation in Europe

The European reform of the railway sector focusing on the emergence of competitive markets for train services and subsequent third party access considerations began more than two decades ago and is still ongoing.

4.1. The gradual process of market opening for train services on the EU level

The gradual opening of the international and domestic markets for commodity and passenger transport services by rail has been a time consuming process and is not finished yet. The liberalization process started in 1991 with Council Directive 91/440/EC for the specific market niches of international groupings of at least two different train companies (private or public undertakings) for goods and/or passenger rail transport services (also ensuring traction) established in different Member States for the purpose of providing international transport services between Member States. Moreover, the market was opened for train companies engaged in international combined transport of commodities, focusing on intermodal transport by rail, waterways and road.⁷ This limitation of en-

⁷ Council Directive 91/440/EC of 29 July 1991 on the development of the Community's railways, OJ L 237, 24/08/1991, p.0025-0028, Article 1 and Article 10.

try to international groups and companies providing combined transport services was criticized and free entry for all licensed train companies was considered necessary (White Paper, COM(96)421 final p. 9).

Meanwhile, rail operators are permitted to run all types of rail freight transport services within and between EU countries, international rail freight transport services (since 2008)⁸ and national rail freight transport (since 2012).⁹ In 2007 markets for international passenger services were also opened, although the right of cabotage was not granted.¹⁰ Since 2012 cabotage is no longer per se forbidden.¹¹ Any licensed railway undertaking has the right to transport passengers from any station along international routes in competition with domestic operators. The opening of national passenger rail markets has been proposed in an

⁸ Directive 2004/51/EC of the European Parliament and of the Council of 29 April 2004 “Council Directive 91/440/EEC of 29 July 1991^{FN} provides that licensed railway undertakings are granted rights of access to the trans-European Rail Freight Network and, at the latest from 2008, to the whole network for international rail freight services” (OJ L 164/165).

⁹ Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (recast), OJ L 343/32 “... the right to access to the railway infrastructure in all Member States for the purpose of operating all types of rail freight services.” (Article 10 (1)).

¹⁰ Directive 2007/58/EC amending Council Directive 91/440/EEC on the development of the Community’s railways and Directive 2001/14/EC on the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure, OJ L 315/44 of 3 December 2007 “... opening of the market for international rail passenger services within the Community” (recital (4)), enacted from 1 January 2010 onwards. According to recital 8 “The introduction of new open-access, international services with intermediate stops should not be used to bring about the opening of the market for domestic passenger services, but should merely be focused on stops that are ancillary to the international route. On that basis, their introduction should concern services whose principal purpose is to carry passengers travelling on an international journey.”

¹¹ Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area, OJ L 343, 14.12.2012 “Article 10(1). Railway undertakings shall be granted the right of access to railway infrastructure in all Member States for the purpose of operating an international passenger service. Railway undertakings shall, in the course of an international passenger service, have the right to pick up passengers at any station located along the international route and set them down at another, including stations located in the same Member State.” Article 10 (2). Thus cabotage is no longer per se forbidden.

ongoing revision called the 4th railway package.¹² Thus, the liberalization process on the EU railway markets towards overall free market entry is making progress.¹³

4.2. The evolution of third party access regulation within the EU

The different steps of third party access regulation have always been motivated by the goal of fostering competition on the markets for train services. Since Directive 91/440/EC, non-discriminatory access to railway infrastructures has been considered to be a precondition for enabling competitive supply of the liberalized markets for train services. Article 1 states that “... by separating the management of railway operation and infrastructure from the provision of railway transport services, separation of accounts being compulsory and organizational or institutional separation being optional”. However, no ex ante regulation of access charges has been introduced, resulting in negotiated third party access.

The period of ex ante third party access regulation started with the implementation of the first railway package,¹⁴ referring to the improvement of competition

¹² Proposal for a Directive of the European Parliament and of the Council amending Directive 2012/34 of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area, as regards the opening of the market for domestic passenger transport services by rail and the governance of the railway infrastructure, COM 2013/0029 final- 2013/0029(COD). According to article 10 (2) “Railway undertakings shall be granted, under equitable, nondiscriminatory and transparent conditions, the right of access to railway infrastructure in all Member States for the purpose of operating all types of rail passenger services. Railway undertakings shall have the right to pick up passengers at any station and set them down at another. That right shall include access to infrastructure connecting service facilities referred to in point 2 of Annex II”.

¹³ For limitation of the right to pick up and set down passengers within another European country (cabotage) due to public service contract considerations, see section 4.3.

¹⁴ Directive 2001/12/EC of the European Parliament and of the Council of 26 February 2001 amending Council Directive 91/440/EEC on the development of the Community’s railways, OJ L 75/1, 15. 3. 2001; Directive 2001/13/EC of the European Parliament and of the Council of 26 February 2001 amending Council Directive 95/18/EC on the licensing of railway undertakings, OJ L 75/26, 15. 3. 2001; Directive 2001/14/EC of the European Parliament and of the Council of 26 February 2001 on

and the efficient use of infrastructure capacity and further directives in order to eliminate technical and legal barriers. Directive 2001/12/EC prescribed not only accounting separation between the provision of transport services by train companies and the management of railway infrastructure (Article 6(1)), but furthermore stated that “Member States may also provide that this separation shall require the organization of distinct divisions within a single undertaking or that the infrastructure shall be managed by a separate entity” (Article 6 (2)). Third party access regulation should guarantee non-discriminatory track access conditions, avoiding cross-subsidization between infrastructure provision and train services by means of accounting and organizational separation between infrastructure management and train services. Referring to Directive 2001/14/EC Article 30 the appointment of an independent sector regulatory body has been required (Article 10 (7)).

Non-discriminatory access to rail infrastructures for the provision of liberalized train services became increasingly relevant, because the scope of liberalized train services has been increasingly enlarged. However, the implementation of access regulation within the different Member States intended by the first railway package was nevertheless considered unsatisfactory. The main obstacles to competition on the train markets most often criticized by the European Commission were a lack of independence between railway infrastructures and railway services with regard to integrated operators, resulting in discriminatory and intransparent track access conditions (European Commission, 2006, pp. 10 f.). In 2008 the Commission addressed infringement letters to 24 Member States, requesting a correct implementation of the first railway package. Some of the Member States followed the request and continued to implement the EU rules properly. However, thirteen Member States did not comply with the request, so the Commission brought the matter before the Court of Justice of the European Union. Infringement procedures against Member States still failing to implement the EU rules enforcing necessary third party access regulations have been initiated in the cases of the Czech Republic, Germany, Greece, Hungary, Ireland,

the allocation of railway infrastructure capacity and the levying of charges for the use of railway infrastructure and safety certification, OJ L 75/29, 15. 3. 2001.

Italy, Luxembourg, Poland, Slovenia and Spain. The infringements consisted of not sufficiently ensuring the independence of the rail infrastructure manager and/or a failure to set up an independent regulatory body and/or inadequate implementation of the regulation of rail access charges.¹⁵ Nevertheless, according to a Communication from the Commission concerning the development of a Single European Railway Area (European Commission, 2010, pp. 6 f.), market access conditions are still considered to be insufficiently precise. In some states, a lack of independence and competences of national regulatory authorities is criticized. Thus, it can take years before a regulatory measure against an anti-competitive practice is finally enforced (European Commission, 2010, p. 7). A European Parliament resolution of June 2010¹⁶ complained again that infrastructure managers lacked independence, that regulations were not enforced sufficiently and that infrastructure financing and the charging framework were inadequate. Therefore the European Parliament urged the Commission to propose a revision of the first railway package, integrating the three directives of the first railroad package. This proposal provided the basis for a compromise between the European Parliament and the European Council.¹⁷

The main goal of EU railroad regulation is to increase competition on the railway markets by improving independence of infrastructure managers, increasing the power of regulatory bodies and guaranteeing not only regulated access to monopolistic bottleneck components, but also partly regulating access to rail-related services such as maintenance facilities, terminals, passenger information and ticketing facilities etc. for freight and passenger trains.¹⁸

¹⁵ Rail services: Commission legal action against 13 Member States for failing to fully implement first railway package, IP/10/807, Brussels, 24 June 2010, <http://europa.eu/rapid/press-release-IP-10-807-en.htm> (accessed 3 March 2014).

¹⁶ European Parliament resolution of 17 June 2010 on the implementation of the first railway package Directives (2001/12/EC, 2001/13/EC, and 2001/14/EC).

¹⁷ Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area (recast), OJ L 343/32, 14.12.2012.

¹⁸ The danger of overregulation due to an oversized regulatory basis is pointed out in Knieps (2013, pp. 161 ff.).

In the context of the Fourth Railway Package proposed by the European Commission on 30 January 2013¹⁹ a proposal for amending Directive 2012/34/EU has been provided, aiming to strengthen ex ante third party access regulation.²⁰ In particular, an integrated railroad company must not have control over the decision making of the infrastructure manager. Nevertheless, an integrated undertaking is still allowed and ownership unbundling not enforced, so that third party access regulation rather than open access regulation may continue,²¹ whereas Article 7 of Directive 2012/34/EU already requires that non-discriminatory access to infrastructure must be implemented independently from the providers of train services. Although an institutional separation of infrastructure management and transport operation is considered the most effective measure to guarantee non-discriminatory access conditions (recital 10), the focus of the proposed Articles 7a and 7b is to enforce the effective independence of the infrastructure manager within a vertically integrated undertaking by enforcing separate financial circuits for the infrastructure manager (provider of railway infrastructure and/or traffic management) and the provider of train services. The concept of third party access in contrast to open access continues to balance the trade-off between property rights and competition on the track. According to the proposed Article 7c the Commission would gain the competency to decide whether providers of train services belonging to a vertically integrated railway company are allowed to become active (on a home market or a foreign market). Even the ful-

¹⁹ Opinion of the European Economic and Social Committee on the ‘Fourth Railway Package’, comprising the following seven documents: ‘Communication from the Commission to the European Parliament, The Council, the European Economic and Social Committee and the Committee of the Regions on “The Fourth Railway Package – completing the Single European Railway Area to foster European competitiveness and growth”’, COM (2013) 25 final, Brussels, 30.1.2013.

²⁰ Proposal for a Directive of the European Parliament and of the Council amending Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area, as regards the opening of the market for domestic passenger transport services by rail and the governance of the railway infrastructure, COM 2013/0029 final- 2013/0029(COD).

²¹ According to recital (10) “The existing requirements of Directive 2012/34/EU only include legal, organisational and decision-making independence. This does not entirely exclude the possibility of maintaining an integrated undertaking, as long as these three categories of independence are ensured. Concerning the decision-making independence it must be ensured that the appropriate safeguards exclude control of an integrated undertaking over the decision-making of an infrastructure manager”.

fillment of access regulations in the proposed Articles 7a and 7b would not necessarily guarantee the right to enter the markets for train services. The issue of third party access regulation is thus used as a lever for ad hoc evaluations of the Commission, regarding the question whether competition on the markets of train services can be observed. Such a performance-based regulation would be completely anti-competitive by its very nature and not compatible with the disaggregated approach of regulatory economics. It would be a combination of two failures: misunderstanding the many faces of competition on the markets for network services and mistrusting the proper application of the instruments of third party access regulation.

4.3 Is there a conflict between universal service objectives and competition for train services?

In Germany, free entry into the markets for train services has existed since 1994, for commodity as well as for passenger services. Sweden and UK meanwhile also have a small amount of free entry operation, and in Italy active competition on new high speed routes can be observed (Nash, 2011, pp. 12 f.). However, there is still a lack of competition in terms of the permission of cabotage. Since cabotage was not forbidden in Regulation EC No. 1370/2007 which was enforced in December 2009, the fostering of cross-border competition is also under consideration within the Fourth Railway Package (Proposed Regulation 2013/0028 (COD)).

Directive 2012/34/EU of 21 November 2012 grants “the right to access to the railway infrastructure in all Member States” not only “for the purpose of operating all types of rail freight services” (Article 10(1)), but also “for the purpose of operating an international passenger service. Railway undertakings shall, in the course of an international passenger service, have the right to pick up passengers at any station located along the international route and set them down at another, including stations located in the same Member State” (Article 10 (2)). Thus, cabotage is no longer per se forbidden. However, such a market entry, and in particular cabotage, must not conflict with public service contracts (Article

11(1)). The question arises whether there is an unsolvable conflict between cabotage and the provision of public services. European Commission (1996, p. 3) already states: “Market forces should also be introduced into domestic passenger transport. This must be done in such a way as to respect network benefits and bolster the provision of public services”.

Subsidies for train services based on universal service objectives are strongly focused on local and regional public passenger transport, although other inland passenger transport services may also be involved (Regulation EC No. 1370/2007).²² Article 4 and proposed Regulation 2013/0028 (COD)²³ prescribe that competitive tendering of public service contracts has to be applied in order to allow non-discriminatory and transparent allocation of subsidies for train services. A public service contract may guarantee exclusive rights for a maximum period of 15 years. Therefore a conflict may arise between exclusive rights and free entry either to allow international passenger service providers to cabotage services or market entrants of inland passenger transportation. This conflict is solved neither by Directive 2007/58/EC nor by Proposed Directive COM 2013/0029 final.²⁴ In particular the economically superior solution that the holder of the exclusive rights could be compensated by a levy on passenger services to contribute to the costs of public service obligations has not been enforced (Knieps, 2013, pp. 167 f.). Even within the fourth railroad package public service contracts are still considered as a justification for market closing during the duration of those contracts.²⁵ In order to strengthen competition on the interna-

²² Regulation (EC) No 1370/2007 of the European Parliament and of the Council of 23 October 2007 on public passenger transport services by rail and by road and repealing Council Regulations (EEC) Nos 1191/69 and 1107/70.

²³ Proposal for a Regulation of the European Parliament and of the Council amending Regulation (EC) No 1370/2007 concerning the opening of the market for domestic passenger transport services by rail, COM(2013) 28 final, Brussels, 30.1.2013

²⁴ Proposal for a Directive of the European Parliament and of the Council amending Directive 2012/34/EU of the European Parliament and of the Council of 21 November 2012 establishing a single European railway area, as regards the opening of the market for domestic passenger transport services by rail and the governance of the railway infrastructure, COM 2013/0029 final 2013/0029(COD).

²⁵ “Granting Union railway undertakings the right of access to railway infrastructures in all Member States for the purpose of operating domestic passenger services may

tional and national long distance markets for train services it is necessary to allow all forms of competition on the track and simultaneously raise an entry tax in order to compensate the holder of the exclusive right to provide subsidized train services. Subsequently the stated conflict between competition on the track and competitive tendering with exclusive rights to provide subsidized train services would disappear.

5. Conclusion: The future of mandatory access in railroads

As has been shown in this chapter the market opening of European railroads over the last decades has been a time consuming gradual reform process increasingly widening the entrepreneurial possibilities for market entry. In the meantime not only the markets for commodity transportation but also the markets for passenger transportation are widely opened for market entry. However, in order to be able to exploit the benefits of free market entry the role of mandatory access to railroad infrastructure will become increasingly important for the future, because railway infrastructure networks in Europe seem to possess enduring monopolistic bottleneck characteristics. In this context an oversized regulatory basis, imposing regulation on competitive market areas, should be avoided. Moreover, cross-border competition should not be obstructed by universal service arguments and subsequent prohibitions of cabotage. Entry into auctioned universal service should not be prohibited, but may be subject to a universal service (entry) tax.

have implications for the organization and financing of rail passenger services provided under public service contract. Member States should have the option of limiting such right of access where it would compromise the economic equilibrium of those public service contracts and where approval has been given by the relevant regulatory body” (Proposed Directive COM 2013/0029 final, recital (14)).

References

- European Commission (1996), White Paper: A Strategy for Revitalising the Community's Railways, COM (96) 421, 30 July 1996, Brussels
- European Commission (2006), Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of the first railway package, COM(2006) 189 final, 03.05.2006, Brussels
- European Commission (2010), Communication from the Commission concerning the development of a Single European Railway Area, COM(2010) 474 final, 17.09.2011, Brussels
- Finger, M., Künneke, R.W. (eds.) (2011), *International Handbook of Network Industries: The Liberalization of Infrastructure*, Edward Elgar Publisher
- Fremdling, R., Knieps, G. (1993), Competition, Regulation and Nationalization: The Prussian Railway System in the Nineteenth Century, in: *Scandinavian Economic History Review*, XLI(2), 129-154
- Grimm, C., Winston C. (2000), Competition in the Deregulated Railroad Industry: Sources, Effects, and Policy Issues, in S. Peltzman, C. Winston (eds.), *Deregulation of Network Industries: What's Next?*, Brookings Institution Press, p. 41-71
- Knieps, G. (1997), Phasing out Sector-Specific Regulation in Competitive Telecommunications, *Kyklos*, 50(3), 325-339
- Knieps, G. (2006 a), Delimiting Regulatory Needs, in: *OECD/ECMT Round Table 129, Transport Services: The Limits of (De)regulation*, Paris, 7-31
- Knieps (2006 b), The Different Role of Mandatory Access in German Regulation of Railroads and Telecommunications, *Journal of Competition Law & Economics*, 2(1), 149-158
- Knieps G. (2011), The Three Criteria Test, the Essential Facilities Doctrine and the Theory of Monopolistic Bottlenecks, *Intereconomics*, 46(1), 17-21
- Knieps, G. (2013), Competition and the Railroads: A European Perspective, *Journal of Competition Law & Economics*, 9(1) 153-169
- Köthenbürger, M., Sinn, H.-W., Whalley, J. (eds.) (2006), *Privatization Experiences in the European Union*, MIT Press, Cambridge (MA), London
- Nash, C. (2011), Developments in European Railway Policy, *Network Industries Quarterly*, 13(1), 11-13
- OECD (2013), *Broadband Networks and Open Access*, OECD Digital Economy Papers, No. 218, OECD Publishing
- Sax, E. (1879), *Die Verkehrsmittel in Volks- und Staatswirtschaft*, Bd. II: *Die Eisenbahnen*, Alfred Hölder, Wien
- Walras, Léon (1875/1980), L'État et les Chemins de Fer, in: *le Nouvelliste Vaudois*, October 1875, revised in: *Revue du Droit public et de la Science politique*, mai-juin et juillet-août 1897; translated by P. Holmes, *The State and the Railways*, in: *Journal of Public Economics*, 13, 1980, 81-100

**Als Diskussionsbeiträge des
Instituts für Verkehrswissenschaft und Regionalpolitik
Albert-Ludwigs-Universität Freiburg i. Br.
sind zuletzt erschienen:**

- 100. G. Knieps:** Privatisation of Network Industries in Germany: A Disaggregated Approach, erschienen in: Köthenbürger, M., Sinn, H.-W., Whalley, J. (eds.), Privatization Experiences in the European Union, MIT Press, Cambridge (MA), London, 2006, S. 199-224
- 101. G. Knieps:** Competition in the post-trade markets: A network economic analysis of the securities business, erschienen in: Journal of Industry, Competition and Trade, Vol. 6, No. 1, 2006, S. 45-60
- 102. G. Knieps:** Information and communication technologies in Germany: Is there a remaining role for sector specific regulations?, erschienen in: Moerke, A., Storz, C. (Hrsg.), Competitiveness of New Industries. Institutional Framework and learning in information technology in Japan, the US and Germany, Routledge, London, New York, 2007, S. 57-73
- 103. G. Knieps:** Von der Theorie angreifbarer Märkte zur Theorie monopolistischer Bottle-necks, in: Daumann, F., Okruch, S., Mantzavinos, C. (Hrsg.), Wettbewerb und Gesundheitswesen: Konzeptionen und Felder ordnungsökonomischen Wirkens, Festschrift für Peter Oberender, Andrassy Schriftenreihe, Bd. 4, Budapest 2006, S. 141-159
- 104. G. Knieps:** The Different Role of Mandatory Access in German Regulation of Railroads and Telecommunications, erschienen in: Journal of Competition Law and Economics, Vol. 2/1, 2006, S. 149-158
- 105. G. Knieps:** Aktuelle Vorschläge zur Preisregulierung natürlicher Monopole, erschienen in: K.-H. Hartwig, A. Knorr (Hrsg.), Neuere Entwicklungen in der Infrastrukturpolitik, Beiträge aus dem Institut für Verkehrswissenschaft an der Universität Münster, Heft 157, Vandenhoeck & Ruprecht, Göttingen, 2005, S. 305-320
- 106. G. Aberle:** Zukünftige Entwicklung des Güterverkehrs: Sind Sättigungsgrenzen erkennbar? Februar 2005
- 107. G. Knieps:** Versorgungssicherheit und Universaldienste in Netzen: Wettbewerb mit Nebenbedingungen? erschienen in: Schriftenreihe der Deutschen Verkehrswissenschaftlichen Gesellschaft: Versorgungssicherheit und Grundversorgung in offenen Netzen, Reihe B, B 285, 2005, S. 11-25
- 108. H.-J. Weiß:** Die Potenziale des Deprival Value-Konzepts zur entscheidungsorientierten Bewertung von Kapital in liberalisierten Netzindustrien, Juni 2005
- 109. G. Knieps:** Telecommunications markets in the stranglehold of EU regulation: On the need for a disaggregated regulatory contract, erschienen in: Journal of Network Industries, Vol. 6, 2005, S. 75-93
- 110. H.-J. Weiß:** Die Probleme des ÖPNV aus netzökonomischer Sicht, erschienen in: Lasch, Rainer/Lemke, Arne (Hrsg.), Wege zu einem zukunftssträchtigen ÖPNV: Rahmenbedingungen und Strategien im Spannungsfeld von Markt und Politik, Erich Schmidt Verlag, Berlin, 2006, S. 119-147

111. **G. Knieps:** Die LKW-Maut und die drei Grundprobleme der Verkehrsinfrastrukturpolitik, erschienen in: Schriftenreihe der Deutschen Verkehrswissenschaftlichen Gesellschaft: Die LKW-Maut als erster Schritt in eine neue Verkehrsinfrastrukturpolitik, Reihe B, B 292, 2006, S. 56-72
112. **C.B. Blankart, G. Knieps, P. Zenhäusern:** Regulation of New Markets in Telecommunications? Market dynamics and shrinking monopolistic bottlenecks, erschienen in: European Business Organization Law Review (EBOR), Vol. 8, 2007, S. 413-428
113. **G. Knieps:** Wettbewerbspotenziale im Nahverkehr: Perspektiven und institutionelle Barrieren, erschienen in: Schriftenreihe der Deutschen Verkehrswissenschaftlichen Gesellschaft: Warten auf Wettbewerb: ÖPNV in Deutschland, Reihe B, 2007, S. 11-23
114. **F. Birke:** Universaldienstregulierung in der Telekommunikation heute: Herausforderungen, Chancen und Risiken – Ein historischer Ansatz, Mai 2007
115. **G. Knieps, P. Zenhäusern:** The fallacies of network neutrality regulation, erschienen in: Competition and Regulation in Network Industries, Vol 9/2, 2008, S. 119-134
116. **G. Knieps:** Disaggregierte Regulierung in Netzsektoren: Normative und positive Theorie, erschienen in: Zeitschrift für Energiewirtschaft, 31/3, 2007, S. 229-236
117. **G. Knieps, H.-J. Weiß:** Reduction of Regulatory Risk: A Network Economic Approach, erschienen in: in: U. Blum (Hrsg.), Regulatorische Risiken – Das Ergebnis staatlicher Anmaßung oder ökonomisch notwendiger Interventionen?, Schriften des Instituts für Wirtschaftsforschung Halle, Bd. 29, Nomos Verlag, Baden-Baden, 2009, S. 99-109
118. **G. Knieps, H.-J. Weiß:** Regulatory Agencies and Regulatory Risk, Revised Version: January 2008
119. **G. Knieps:** Regulatorische Entbündelung in Netzindustrien, erschienen in: Tagungsbände der Gesellschaft für Verkehrswissenschaft und Regionalpolitik an der Universität Freiburg e.V., 40. Freiburger Verkehrsseminar 2007, Entbündelung in Netzindustrien: Chancen und Risiken, Freiburg, S. 11-25
120. **G. Knieps:** The Net Neutrality Debate and the German Communications and Competition Law, erschienen in: Journal of Law & Economic Regulation, Vol. 3/1, 2010, S.118-126
121. **G. Knieps:** Verkehrsinfrastrukturen zwischen Wettbewerb und Regulierung, erschienen in: Wirtschaftspolitische Blätter, 56/1, 2009, S. 11-21
122. **G. Knieps:** Wettbewerb und Netzevolutorik, erschienen in: Vanberg, V.J. (Hrsg.), Evolution und freier Wettbewerb – Erich Hoppmann und die aktuelle Diskussion, Walter Eucken Institut, Untersuchungen zur Ordnungstheorie und Ordnungspolitik, Band 58, Mohr Siebeck, Tübingen, 2009, S. 193-210
123. **G. Knieps, P. Zenhäusern:** ‘Stepping stones’ and ‘access holidays’: The fallacies of regulatory micro-management, erschienen in: P. Baake, R. Borck (eds.), Public Economics and Public Choice: Contributions in Honour of Charles B. Blankart, Springer Verlag, Berlin u.a., 2007, S. 257-277
124. **G. Knieps:** Qualitäts- und Preisdifferenzierung im Internet, erschienen in: Jörn Kruse, Ralf Dewenter, Hrsg., Wettbewerbsprobleme im Internet, Nomos Verlag, Baden-Baden, 2009, S. 103-113

125. **G. Knieps:** Wettbewerb im transeuropäischen Eisenbahnverkehr, erschienen in: Zeitschrift für Verkehrswissenschaft, 81. Jg., Heft 1, 2010, S. 1-12
126. **G. Knieps:** Sektorsymmetrische Regulierung in Netzsektoren: Ein Vergleich zwischen Gas und Elektrizität, erschienen in: Netzwirtschaften & Recht (N&R), 6. Jg., Nr. 3, 2009, S. 138-143
127. **G. Knieps:** Theorie und Praxis der Price-Cap-Regulierung, in: Netzwirtschaften & Recht (N&R), 7. Jg., Nr. 2, 2010, S. 66-71
128. **G. Knieps, P. Zenhäusern:** The reform of the European regulatory framework for electronic communications: The unexploited phasing-out potentials, erschienen als: Phasing out sector-specific regulation in European telecommunications, erschienen in: Journal of Competition Law & Economics, Vol. 6/4, 2010, S. 995-1006
129. **G. Knieps:** Regulatory Reforms of European Network Industries and the Courts, erschienen in: W.A. Kaal, M. Schmidt, A. Schwartz (Hrsg.), Festschrift zu Ehren von Christian Kirchner: Recht im ökonomischen Kontext, Mohr Siebeck, Tübingen, 2014, S. 917-934
130. **G. Knieps:** Preis- und Qualitätsdifferenzierung in Verkehrsnetzen, erschienen in: DIW Vierteljahreshefte zur Wirtschaftsforschung, 79/2, 2010, S. 211-220
131. **G. Knieps:** Zur Evolutorik von Marktmechanismen für Flughafenslots, erschienen in: S. Bechthold, J. Jickeli, M. Rohe (Hrsg.), Recht, Ordnung und Wettbewerb, Festschrift zum 70. Geburtstag von Wernhard Möschel, Nomos, Baden-Baden, 2011, S. 369-379
132. **G. Knieps:** The Three Criteria Test, the Essential Facilities Doctrine and the Theory of Monopolistic Bottlenecks, erschienen in: Intereconomics, 46/1, 2011, S. 17-21
133. **G. Knieps:** Der Einfluss von Gerichtsentscheidungen auf Regulierungsreformen, erschienen in: Tagungsbände der Gesellschaft für Verkehrswissenschaft und Regionalpolitik an der Universität Freiburg e.V., 43. Freiburger Verkehrsseminar 2010, Regulierung und Wettbewerb in Netzen: Zur Rolle der Gerichte, Freiburg, 2010, S. 5-21
134. **H.-J. Weiß:** Markt und Staat in der Verkehrswirtschaft, erschienen in: Zeitschrift für Verkehrswissenschaft, 83/2, 2012, S. 110-131
135. **G. Knieps:** Network neutrality and the Evolution of the Internet, erschienen in: International Journal of Management and Network Economics, 2/1, 2011, S. 24-28
136. **G. Knieps:** Market driven network neutrality and the fallacies of Internet traffic quality regulation, erschienen in: International Telecommunications Policy Review, 18/3, 2011, S. 1-22
137. **G. Knieps:** Regulatory unbundling in telecommunications, erschienen in: Competition and Regulation in Network Industries, 12/4, 2011, S. 344-356
138. **G. Knieps:** Zur Arbeitsteilung zwischen Markt und Staat bei der Bereitstellung von Eisenbahninfrastrukturen, erschienen in: M. Hochhuth (Hrsg.), Rückzug des Staates und Freiheit des Einzelnen: Die Privatisierung existentieller Infrastrukturen, Duncker & Humblot, 2012, S. 77-92

139. **G. Knieps:** Warum und wozu Regulierung im europäischen Mehr-Ebenen-System? – Gründe für bzw. Ziele von Regulierung, erschienen in: C. Manger Nestler, L. Gramlich (Hrsg.), Europäische Regulierungsstrukturen und -netzwerke: Basis einer künftigen Infrastrukturvorsorge, Nomos Verlag, 2011, S. 25-35
140. **G. Knieps:** Wettbewerb und Pfadabhängigkeit in Netzen, erschienen in: H. Enke und A. Wagner (Hrsg.), Zur Zukunft des Wettbewerbs. In memoriam Karl Brandt (1923-2010) und Alfred E. Ott (1929-1994), Metropolis-Verlag, Marburg, 2012, S.171-178
141. **G. Knieps, P. Zenhäusern:** The reform process of the railway sector in Europe: A disaggregated regulatory approach, December 2011
142. **G. Knieps:** Competition and the railroads: A European perspective, erschienen in: Journal of Competition Law & Economics, 9 (1), 2013, S. 153–169
143. **G. Knieps:** Europäische Telekommunikationsregulierung: Quo vadis?, erschienen in R. Dewenter, J. Haucap, C. Kehder (Hrsg.), Wettbewerb und Regulierung in Medien, Politik und Märkten, Festschrift für Jörn Kruse zum 65. Geburtstag, Nomos, Baden-Baden, 2013, S. 37-62
144. **G. Knieps, P. Zenhäusern:** Regulatory fallacies in global telecommunications: The case of international mobile roaming, erschienen in: International Economics and Economic Policy (IEEP), 11/1, 2014, S. 63-79
145. **G. Knieps:** Der Irrweg regulatorischer Marktsplattung: Zur Novelle des Personenbeförderungsgesetzes in Deutschland, erschienen in: Zeitschrift für Verkehrswissenschaft, 84/1, 2013, S. 69-77
146. **G. Knieps:** Market versus state in building the aviation value chain, erschienen in: Journal of Air Transport Management, first published online, 14. Juli 2014, Vol. 41, S. 30-37
147. **G. Knieps:** The Evolution of the Generalized Differentiated Services Architecture and the Changing Role of the Internet Engineering Task Force, Paper presented at the 41st Research Conference on Communication, Information and Internet Policy (TPRC), September 27-29, 2013, George Mason University, Arlington, VA
148. **G. Knieps:** Regulierungsfehler in Netzindustrien, erschienen in: Wirtschaftspolitische Blätter, 2013, Heft 4, S. 717-729
149. **G. Knieps, V. Stocker:** Market Driven Network Neutrality and the Fallacy of a Two-Tiered Internet Traffic Regulation, Paper to be presented at the 42nd Research Conference on Communication, Information and Internet Policy (TPRC), September 12-14, 2014, George Mason University, Arlington, VA
150. **G. Knieps:** Regulation and Third Party Access in Railroads, erscheint in: M. Finger, T. Holvad, P. Messulam (eds.), Rail Economics, Policy and Regulation in Europe, Edgar Elgar, Cheltenham et al., 2014