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Governance of competition and performance in European railways: An analysis of five cases

Matthias Finger [a,b]

[a] Ecole Polytechnique Fédérale Lausanne, Switzerland
[b] Florence School of Regulation – Transport Area, Italy

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ABSTRACT

Based on extensive qualitative research, this article analyzes the governance of competition in European railways and relates this to their performance via five case studies covering the Netherlands, France, Germany, Sweden and the UK. Even though some trends can be identified, such as regionalization, system fragmentation, and the strengthening of the regulatory function, each country's governance appears to be a type of its own, with a unique relationship between governance and railway performance.

1. Introduction

This article discusses the liberalization of the railway industry in Europe, particularly its institutional dimensions. More precisely, we want to know whether liberalization – as an institutional change accompanied, among other aspects, by the creation of competition, independent regulatory authorities and often other, complex institutional arrangements – leads to better performance of the railway systems. As of 1 January 2010, European railway undertakings have been granted a right of access to the rail infrastructure of other member states for the purpose of operating international passenger services, including cabotage (Directive 2007/58/EC). Such market opening comes on top of the already-existing access in the cargo market as of 2007 (Directive 2004/51/EC). While offering new business opportunities to railway undertakings and infrastructure managers, the mandated access takes place in a still-developing institutional environment. Political and regulatory authorities in the EU are still struggling with the application of this and the previous directives (Directives 91/440/EEC amended by Directive 2004/51/EC, by Directive 2007/58/EC, as well as by Directive 2012/34/EU, the so-called Recast). For instance, member states are allowed to limit the right of access on routes covered by public-service contracts if certain conditions are met, or to charge a levy on international rail passenger services to compensate for the costs incurred by such public-service contracts. Most of the EU member states have unbundled their historical railway operators (as mandated by Directive 91/440/EC) and created regulatory authorities. However, and despite the EU directives that are common to all member states, the institutional arrangements governing the railway sector still differ markedly from country to country, as does the performance of each national railway system, as well as the overall benefits derived from liberalization.

The article is based on a thorough qualitative identification and description of the main types of institutional arrangements that have emerged in a selected number of member countries as a result of their legacies, combined with the European directives over the past 25 years. Here, "institutional arrangements" refer, in the tradition of new institutional economics, to the different actors involved in governing the railway sector of a country (for example, railway undertakings, infrastructure companies, sector-specific regulators, competition regulators, price regulators, national offices, political actors, legal actors and so on), their responsibilities (decision rights), as well as the formal and informal rules governing the relationships among them (distribution of these decision rights among these actors).

An analysis of the existing literature on governance and competition in the railway sector, along with our own knowledge on the subject, has led us to select and build five country case studies; namely those of the Netherlands, France, Germany, Sweden and the UK. A detailed factual description of these countries' institutional arrangements, as well as their evolution since the creation of competition in the respective country, is available on the Florence School of Regulation Transport website (Available at: http://fsr., 2012). Quantitative indicators available through international institutions (Eurostat, Organisation for Economic Co-

E-mail address: matthias.finger@epfl.ch.

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operation and Development (OECD), European Energy Agency), and therefore comparable across countries, have been used as the basis for investigating the relation and the possible existence of an empirical link between the performance and evolution of institutions.

The article is structured as follows: in the first section we will offer a brief summary of the literature on competition in railways, and outline our argument for selecting the five case-study countries in question. The second section will highlight the findings of the analysis of the institutional arrangements in the case countries. In section three, we will seek to establish a relationship between the five different types of institutional arrangements (country cases), and the performance of their respective national railway systems. In the conclusion, we will develop recommendations for policy makers.

2. Governance of competition in the European railway sector

This section is divided into four parts. We start out by reviewing literature on the governance of competition in the railway sector. Subsequently, we analyze the current state of competition in the European railway sector, which leads us to select the countries of our study. The section concludes with a summary presentation of the key institutional decisions in each country.

2.1. State of the literature

In a discussion paper on the competition for long-distance passenger rail service, Preston (2009) notes that "rail competition, where it occurs, is likely to be small group in nature. Market demand is often too thin to support a large number of operators, whilst there may be some economies of scale and density that limit the optimum number of firms in rail markets. The relevant industry structure is therefore that of oligopoly competition" (p.4).[1] While most economists and policy makers agree that competition should be introduced in railways, agreement on how this should be done is lacking. According to (OECD Competition Committee, 2006), the three possible modes of competition in the railway sector are as follows:

1. Competition in the market between vertically integrated rail companies; this form of competition requires the existence of at least two separate rail infrastructures capable of providing substitute rail services (for instance, two different rail routes between a given city-pair); this is the predominant form of competition in rail freight services in North America.
2. Competition in the market between train operating companies with regulated access to track infrastructure (which may or may not be owned by one of the companies providing train services); this, also called "access competition," is the predominant form of competition in freight services in Europe and most of Australia.[2] (Pittman, 2008) notes that competition in the market can be further broken down into a complete "vertical separation" model – which involves prohibiting the network operator from operating its own trains, a policy strongly encouraged by the European Commission (EC) – and a "third-party access model," which entails a vertically integrated infrastructure, and train companies forced to allow access to their infrastructure to competing train-operating companies. The latter is, as we will see, the case in some of the European member states.
3. Competition for the market between rail companies (either for integrated track-plus-train services, or for train services alone, operating under a regime of regulated access to the track infrastructure); this model, which is characterized by competitive tendering, is the predominant form of competition for regional passenger services in some EU countries.

Europe's (that is, the EC's) favored approach to competition is, at least originally, of the second kind. Like in the other network infrastructures (such as electricity, gas, and telecommunications), its broad idea is to separate the transport from the infrastructure and, by doing so, to create a competitive environment among transport operators (similar to telecom operators, electricity producers, etc.). This approach is fundamentally different from competition among vertically integrated train and infrastructure enterprises, which is the model chosen by policy makers in the geographically large, freight-dominated countries of the Americas (that is, originally chosen by the US and Canada, but more recently also by Mexico, Brazil, and Argentina).[3] Over time, the third approach to competition – that is, tendering for regional passenger services, often under a public-service obligation – has also emerged, but in a decentralized, bottom-up way.

Therefore, as we will discuss in Section 4.1, the main academic debates in Europe pertain to the institutional structure of national railway systems. This is ultimately a question of how vertical separation (between infrastructure and transport) affects rail efficiency and performance. Also, within this literature, the status of competition is not clear: is it a means of reaching a goal (such as efficiency, performance) or is it a goal in itself? Alternatively, can the goal (efficiency, performance) be achieved without (much) competition; in other words, simply via the proposed institutional changes, as the EC's approach seems to suggest? As we will see below (Section 4), the literature is not conclusive with respect to the optimal institutional model. This is even more astonishing given that the entire effort of the EC over the past 25 years aims precisely for radical change in the governance of the European railway sector, but apparently without a clear idea of how such institutional changes affect overall railway performance.

We therefore make an intellectual distinction between competition on the one hand, and the institutional arrangements on the other. Consequently, we first discuss the question of competition (remainder of Section 2), then discuss the institutional arrangements in themselves (Section 3) and subsequently relate the institutional arrangements to performance (Section 4).

2.2. State of competition in European railways

On an empirical level, and as a result of this combined top-down (access competition) and bottom-up (competitive tendering) approach in Europe, the degree to which competition among train operating companies has indeed emerged varies significantly by country.

[1] In fact, classical models assume that competition occurs either in the price dimension (Bertrand competition), or in the service dimension (Cournot competition). The conventional wisdom is that where capacity is difficult to increase (for example, in relation to rail), competition will be of the Cournot type, but where capacity can easily be increased (for example, in relation to buses), competition will be of the Bertrand type (Quinet and Vickerman, 2004).

[2] Recently, such "access competition" has appeared in long-distance passenger transport in Austria (Westbahn), in Germany (Hamburg – Köln Express), in the Czech Republic, in the UK, and on the Italian high-speed network.

[3] This "American model" of competition can be further divided into a "North American model" – the US and Canada, with an emphasis on origin-destination competition between "parallel" vertically integrated railways – and a "Latin American model" – Mexico, Brazil, Chile, and Argentina, with an emphasis on competition for the business of shippers and customers at particular points served by more than one railway.

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