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Evaluating the roles and powers of rail regulatory bodies in Europe: A survey-based approach

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ABSTRACT

European railways have been shaped by multiple reforms since the mid-1990s, covering industry structure, market opening and economic regulation. However, the literature has given little attention to the latter; namely the evolution and impacts of regulatory reforms amongst Europe's railways. This paper fills this gap by providing an up-to-date, bottom-up assessment of current rail regulatory practice in Europe. We develop a survey of economic regulators across Europe, thus complementing top-down studies of the impact of economic regulation by enabling a richer insight into regulatory activity and its impacts. The questionnaire is based on a review of the literature on ideal regulatory characteristics across multiple industries. Our results show that European rail regulators, in general, exhibit many of the features of ideal regulation; in particular around key features such as independence, resourcing, longevity and expertise, transparency and in turn stability and predictability. However, we find that rail regulatory bodies could take a more proactive role in shaping track access charges, given their importance in respect of efficient use of the network and maintaining non-discriminatory access. Importantly, there is also scope for regulators to play a greater role in regulating the efficiency and quality of infrastructure managers, and potentially becoming more involved in the designing stages of passenger market opening as it emerges; and these changes could deliver substantial beneficial impacts for rail users and funders across Europe.

1. Introduction

Among the European railway reforms implemented from the 1990s, the introduction, renewal and strengthening of regulatory roles have been of primary importance. Given the aim of the European Commission to turn around the previously stagnating performance of railways through stimulating competition, strong regulation is needed to allow the successful implementation of the reform programme. The natural monopoly element of the infrastructure requires regulation to ensure that it is cost efficient and delivers the required investment and quality of network. The prices for access to the infrastructure should also be set in accordance with economic principles, and it is crucial that new entrants can gain fair access to the infrastructure in order to stimulate competition (non-discrimination). Regulatory reform therefore also goes hand in hand with the Commission's legislation targeting vertical separation, either with infrastructure and operations in separate legal entities, or at least in separate divisions of the same parent company. To play an effective role, economic regulators need to be independent both of government (given its role as funder and owner of the incumbent rail operator and infrastructure managers in most EU countries) and railway companies.

Nevertheless, these regulatory reforms have attracted little attention in the literature on the impacts of railway reforms, which has concentrated much more on structural and market interventions. Those studies that have looked at the impact of rail regulatory reforms in Europe have focused on top-down econometric methods, introducing regulatory variables into an econometric cost function. Some studies have adopted relatively simple measures of regulation (i.e. dummy variables capturing the presence or not of an independent economic regulator (e.g. Wetzel, 2008)). Smith et al. (2015) build on this approach by introducing a multi-dimensional regulation index into a translog cost system.

Smith et al. (2015) demonstrate that over the period of their sample – 2002–2011 – the strength of economic regulation in Europe's railways increased considerably, as measured by their regulation index, which extracts the regulatory-related aspects of the Rail Liberalisation Index reports (IBM and Kirchner, 2002, 2004, 2007 and 2011). Over that time

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the reforms had a beneficial impact on costs, particularly when combined with vertical separation. However, even this improvement was not considered adequate by the European Commission, which set out further reforms in the 2012 Recast of the First Railway Package (European Parliament and Council Directive, 2012/34/EC, "Recast" hereafter). These reforms focused particularly on ensuring regulatory independence (from government) and giving regulators increased powers (see Smith et al., 2015).

A clear gap in the literature, therefore, is an up-to-date (post-2012 Recast), in-depth, bottom-up documentation and assessment of rail regulatory practice in Europe, which is the focus of this paper. We undertake such an appraisal through a survey of economic regulators across Europe, thus complementing previous top-down, econometric studies. In particular, our approach allows a richer insight into regulatory activity and the mechanisms by which regulators are influencing (or not) the activities of European rail firms and the resulting impacts on final outcomes in the sector.

The novelty of this paper can be summarised as follows. Firstly, our study of the regulatory role expands on the analysis of previous studies in order to account not only for the independence of the regulators (the focus of most previous work, with the exception of Smith et al., 2015), but also for the increasing number of powers assigned to these bodies. These regulatory trends are analysed in order to capture potential patterns at the European level. Secondly, for this purpose, an extensive review of what best describes an "ideal rail regulator" is carried out. The findings of this literature review crucially inform the design of a questionnaire sent to industry actors, ensuring updated first-hand evidence on the current trends regarding rail regulation. Survey-based approaches for examining regulatory frameworks have previously been used in transport (e.g. Beria et al., 2015, for motorways). Thirdly, our qualitative, bottom-up approach complements the top-down econometric analysis carried out in Smith et al. (2015) as noted. Finally, our work brings the analysis of regulatory activity up-to-date, covering the period post the 2012 Recast up to October 2014.

The remainder of the paper is structured as follows. Section 2 first explains the rationale for rail regulation in more detail, before summarising the relevant European legislation. Section 3 includes a review of the literature on what constitutes an "ideal economic regulatory body" in general and as applied to railways. The related findings are key to the design of the questionnaire on the role of rail regulation, described in Section 4, together with details on the participants and collection of data. Results emerging from the questionnaire are reported and discussed in Section 5, and concluding remarks are presented in Section 6.

2. Background on legislation on rail regulators

This section is divided into two parts. We first set out the rationale for regulating Europe's railways. In the second part we briefly review the relevant European legislation pertaining to rail regulation.

2.1. Why regulate Europe's railways?

Regulation might be expected to play an important role in railway markets for several reasons. The implementation of vertical separation in a number of European countries involves the emergence of important interactions occurring between disjointed interfaces, namely the infrastructure managers on one side, and the railway undertakings on the other. These interactions are typically related to investment strategies, capacity allocation and timetabling, as well as real-time operations, creating an interdependent environment for railway undertakings, infrastructure managers and (at times) governments. Here we use the term vertical separation to mean full, legal separation of rail infrastructure from train operations. The intermediate position, the "holding company" model, has also been adopted in several European countries, and refers to a situation where infrastructure and operations are organised into separate divisions within the same parent group.

If with vertical integration (and to some extent with the holding company model), transaction costs are argued to be small because the interactions are between entities sharing the same business interests, with vertical separation these costs are likely to reach greater levels, since the parties involved are placed on opposing positions, and the possibility of reaching compromises is inevitably reduced. It should be noted that whilst direct transaction costs may be small in railways (see Merkert et al., 2012), the greater problem probably lies in the costs associated with misaligned incentives and the (perhaps bad) decisions resulting from this (see van de Velde et al., 2012). In this scenario, regulators could act as impartial third parties, attempting to minimise transaction costs and the associated wider problems of misalignment of incentives. To be effective, the regulatory role should be independent of governmental or, more generally, political influence, when the negotiations involve railway undertakings or network managers controlled (directly or indirectly) by government.

In these unbundled contexts, regulators can also help improve rail system efficiency. Infrastructure managers in separated systems may be less incentivised to be efficient in contrast with more integrated models, where the efficiency achieved by the infrastructure managers has wider implications for the financial performance of the parent group. In separated models, this shared interest tends to fade, and here the regulator may need to step in to exert the necessary pressure on infrastructure managers. This potential role of the regulator is also envisaged by the Recast (section 2.2). This sees regulators potentially playing a greater role in incentivising and enforcing improved efficiency and quality performance.

Whilst the control of infrastructure managers' performance and efficiency produces direct effects on costs on the part of the regulators, monitoring non-discrimination and promoting and strengthening competitive conditions impact indirectly on the efficiency of a railway system. Through the resolution of disputes on competition and, more generally, the prevention of practices deviating from this objective, regulators might play a role in ensuring that potentially more efficient players are allowed to enter the railway arena, thus also putting pressure on the incumbent to become more efficient. However, to date, whilst there has been competition in freight markets in Europe, this has been much less prevalent in passenger markets.

Institutionally, in order to obtain these goals, three rail regulatory models have been developed in Europe (see IBM Business Consulting Services, 2006; Crozet et al., 2012): the ministry model (Model 1), the railway authority model (Model 2), and the special regulatory authority model (Model 3). While Model 1 was made illegal by the Recast (see section 2.2), Model 2 has gradually lost popularity in favour of Model 3, now utilised in 20 countries, as opposed to 7 countries in 2006 (IBM Business Consulting Services, 2006).

2.2. Overview of rail regulation legislation in Europe

Railway reforms implemented since the mid-1990s have covered multiple and diverse aspects, focusing on the structure, regulation, and competitive conditions of the market. From a legislative point of view, this stimulus has produced Three Railway Packages,[1] one Recast and the proposal for a Fourth Railway Package (COM (2013) 25, final). This section concentrates on those legislative acts altering regulatory positions, and in particular the Recast.

In 2012, the Recast determined an important legislative breakthrough, attempting to resolve many problems in European regulatory practice (see Smith et al., 2015). Particular problems included the scarce

[1] First Railway Package: European Parliament and Council Directives 2001/12/EC, 2001/13/EC and 2001/14/EC. Second Railway Package: European Parliament and Council Directives 2004/49/EC, 2004/50/EC, 2004/51/EC and Regulation (EC) No.881/2004. Third Railway Package: European Parliament and Council Directives 200758/EC, 2007/59/EC and Regulations (EC) Nos. 1370/2007, 1371/2007, 1372/2007.