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ABSTRACTS

Bureaucratic Control Reversed. The Influence of Independent Regulators over the Liberalisation of the Railways

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With the rise of the regulatory state and as a result of the liberalisation of network industries, regulatory agencies in the EU have increasingly witnessed a radical change in their nature: from hierarchically integrated ministerial entities to independent regulatory authorities (IRAs). On the one hand, this process of institutional insulation should rigidly separate the implementation phase, delegated to the IRAs, from the policy-making phase, which should rest with elected politicians. However, this sharp institutional separation and the high concentration of expertise that characterise IRAs could also empower the regulators, allowing them to cultivate a good reputation for independent regulation and public interest across its constituents, and eventually increasing their influence over elected politicians. In fact, while the scholarship on bureaucratic politics made important strides to enhance our understanding of how politicians seek to exert control over bureaucracies in order to prevent slack, very rarely have scholars distinguished between a broad form of agency slacking implementation – where agencies implement something different from the original policy envisaged by politicians – and bureaucratic influence over politicians – where agencies influence the main decisions taken by politicians. The concept of bureaucratic control reversed that I introduce in this paper tries to account for this mostly-unexplored mechanism, recognising the power of bureaucracies to control politicians and legislation.

Focusing on the regulatory framework of the liberalisation of the railways in Europe, in this paper I advance a novel account of bureaucratic control reversed that underpins a causal pathway which bridges explicit contacts – i.e., agency institutional design and the degree of liberalisation of the market – and implicit contracts, namely the reputation that the agency manages to build in the post-delegation phase. In particular, I claim that IRAs – when endowed with a strong design and when they operate in a policy environment which allows them to embark upon reputation-building activities – can control politicians, elevating themselves to informal legislators. Methodologically, I employ multilevel modelling and mediation analysis, trying to disentangle the extent to which the effect of agency institutional capacity on bureaucratic influence over legislation is mediated by agency's reputation. This paper ultimately aims to contribute to the scholarship on agency policy-making, bridging structural politics (i.e., agency design) and reputation-based accounts of bureaucratic behaviour.

Competition Law Challenges in Domestic Rail Passenger Services

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With the implementation of the Fourth Railway Package railway undertakings will be able to offer domestic passenger services in all Member States of the European Union by bidding for public service contracts or by offering competing commercial services. The Fourth Railway Package has indeed completed the process of gradually opening up rail markets to competition, which already led to the liberalisation of rail freight services and international passenger services in 2007 and 2010 respectively. Besides opening markets to competition, EU legislation laid down a regulatory framework aimed at ensuring a level playing field between the incumbent railway operator and the new entrants, so that *de jure* liberalisation can actually work in practice.

However, as in other liberalised industries, competition law is also likely to play an important role in ensuring the development of effective competition in domestic rail passenger services.

The paper analyses the main competition law challenges facing incumbents and new entrants, but also competition authorities, drawing on the experience in other liberalised rail markets and the practice of the competition authorities in those countries that have already liberalised those services. At an early stage of market opening, competition law enforcement is likely to focus on the application of Article 102 TFEU and equivalent national provisions which prohibit the abuse of a dominant position. Incumbents, as former monopolists, are likely to retain during a certain period of time significant market share and other competitive advantages which could lead competition authorities to find that they hold a dominant position. New entrants could be keen on using competition law instruments to seek access to the incumbent's facilities and services or challenge other allegedly exclusionary practices. Thus, claims of abuse of market power by the incumbent are likely to be brought by new entrants, triggering the intervention of the competition authorities. The paper first addresses the issue of market definition and dominance, including the possible impact of intermodal competition. It then turns to the analysis of potential competition issues in domestic rail passenger services. The paper analyses potential potential claims of refusal of access, asking if and to what extent new entrants may rely on competition law to obtain access to the incumbent's facilities and services beyond what is already ensured by the applicable legislation. In particular, it assesses the possibility of invoking the so-called 'essential facility' doctrine to obtain access to rail infrastructure, maintenance facilities, station buildings or ticket reservation systems. It also specifically addresses the controversial issue of access to the incumbent's rolling stock. The paper then turns to the analysis of potentially problematic pricing practices — including margin squeeze, predatory pricing and price discrimination — pointing out the methodological issues which have arisen in the application of the legal and economic tests developed by the competition authorities to assess this kind of practices, as well as possible different approaches taken by these authorities.

Finally, the paper analyses tying and bundling practices, as well as other potentially abusive practices which fall within the broader category of exclusionary practices contrary to the principle of competition on the merits and are often related to the conflict of interest that may arise within a group of vertically integrated rail undertakings.

Competition in the Railway Passenger Market. The challenge of liberalisation.

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Railway passenger services have been opening up to competition in recent years. Indeed, High Speed Railway services (HSRS hereinafter) and fast trains lines are engaged in competition where former state-owned firms share tracks and stations with new operators. A number of EU Railway Packages obliged firms to move from the monopoly towards competition. It was intended to enhance firms' profitability but also consumers' benefits, but European experiences across European country members reveal that there are a number of issues to be discussed. Further proposals are made in the Commission's 4th Railway Package.² It is expected to run by 2020 for the opening-up of the national passenger market, and 2023 for the public service obligations (PSO). An open question is whether railway services can be exploited as a competitive market, i.e. under an oligopoly configuration, or not. There is no common wisdom about how a liberalization process has to be done. The present paper focuses on the issue of the extent to which the railway passenger market can operate under a duopoly configuration. Under these premises, we study the level of aggregate welfare, firms' profits, and consumer surplus. Vertical integration between operators and firm's track maintenance is also studied. Our main result is that liberalization in a context of competition in the market is only profitable for consumers and firms when marginal costs are low and product differentiation is large. Moreover, a degree of partial privatisation favors competition. Vertical integration between the state-owned firm and the firm who owns tracks and stations is the main obstacle for liberalization.

The Institutional Design of Client Bodies in Short-distance Rail Services and Its Effects on Service Quality

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The institutional design of regulation authorities is part of regulation itself and is underrepresented in research. While advantages and disadvantages of public procurement as such are well studied in diverse branches of public activity, only little attention is paid to the institutional design of the procurement institution. The effect of this design on the ultimate output – on the aim of the procurement – remains far too often a black box. Under these circumstances, conjectures about a sensible design spread and lead to diverging approaches in actually neighbouring divisions.

The impact of decentralization is one major field of speculation. It is often claimed an established means of administrative reform in order to enhance public services. From theory, it is assured a perfect ambiguity: When decentralization is employed, on the one hand, the notion of administration as an inscrutable black box gives way to a responsive servant of the citizen, locally grounded and reasonable in decision-making. On the other hand, the threat of divided and therefore hidden responsibility is discussed. In empirical analysis, it is rather the negative connotation of decentralization that fits to the field of rail transportation: The “regionalization“ of short-distance services in German passenger rail transport included strong elements of decentralization, thereby leaving a lot of leeway for the federal states in implementing it. This study shows that those states that installed a rather centralized structure provide better services to rail customers than others. Since these results find support for various indicators of service quality and for different techniques of investigation, it adds new – and contrary – evidence to the empirical literature of decentralization. In contrast to other aspects of institutional design, the degree of centralization turned out to be the key variable.

Towards Rail-related Multimodal Digital Freight Exchange Platforms: Exploring Regulatory Topics at EU Level

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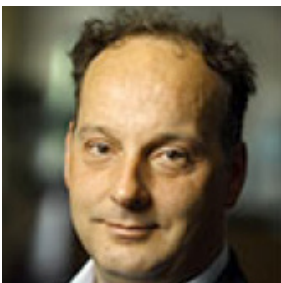
The use of online road freight transport exchanges in the EU-28 countries is widespread today. More than a hundred of such exchanges for road transport can be identified, indicating a strong level of competition. Some exchanges attempt to distinguish themselves by developing new services, for e.g. in collaboration, with logistics industries. Due to this development, the complexity of management and control increases, thus generating new requirements for e.g. regulation. In contrast, such developments are not manifest in the number and performance of online rail freight exchanges: the few known exchanges have shown a very low rate of success.



This paper therefore, compares the two sided online rail freight/transport exchanges active in EU-28 countries to those active in road, for collecting insights on success factors related to the implementation of regulatory, market related, technical and operational practices. Similar insights on best practices prevalent in exchanges from other mature network industries like energy and passenger transport network industries are explored for transferability to the rail freight industry. This analysis is triggered by the aim of the EU white paper policy goals on modal shift for the next decade. The scope of this research is surface transport and therefore does not include inland waterways.



This paper presents comparative qualitative analyses on freight and selected network industries' exchanges to gain insights into prerequisites and criteria needed for designing and testing a multimodal exchange platform using road and rail in a later stage of research. The theory on Capability Maturity development is applied, which assumes that actors engaged in a transition process, steadily grow in terms of their capability to deal with the various issues rising from the required transition goals. In this regard, the rail freight industry is challenged to move from its current low level of maturity in (multimodal) services offered to a significantly higher level, enabling a growth rate for rail transport that is above the average growth rate in the European surface freight transport sector. For this, based on the theory, a literature review and interviews, the paper develops a Capability Maturity Model (CMM) framework for online exchanges in freight transport. Finally, it summarizes learnings for the proposed multimodal freight exchange using rail and the regulatory topics for freight transport. A similar research on maturity assessment of practices in online exchanges related to network industries could not be found.



Effects of Inter- and Intra-Modal Competition on Prices and Frequencies in the Interurban Railway Market: Evidence from Europe

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This paper explores the effect of competition on prices and frequencies for the Interurban rail market in Europe. The market is defined by long distance train services mixing classical speed and high speed. The intramodal competition is usually in “open access” for long distance services in Europe and can be formalized through the Herfindahl-Hirschman Index (HHI) commonly used to assess the level of concentration between different firms on a market. The intermodal competition takes into account the air transportation, as usually in the literature, but includes new type of services as coach services and carpooling services. The analysis is original by an extended perimeter including seven European countries and a total of 90 routes. The method is based on an econometric analysis which has never been applied yet to the rail market and its specificities in terms of competition. Results show that intra-modal competition have a significant impact on frequencies for long distance train services but no significant effect on prices in economic class. Otherwise, the effects of intermodal competition are limited mainly because of the strong differences between the market structures in terms of travel time, comfort or user’s preferences. It is the case of coach and carpool services, available when prices for train are high, but not of air transport which can drive train operators to decrease their prices in case of direct competition for long distance.

Road to Competition in the Italian Regional Railways Sector

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The aim of this study is to analyse and evaluate the liberalisation process in the railway sector with particular reference of regional transport under the Regulation (EC) 1370/2007 as modified by EU Regulation 2338/2016.

In this context, the direct award procedure by the local authorities represents one of the main issues.

Italy has pursued competition for the market for regional and local passenger services: even if the legislation increased its favour for the selection by means of competitive procedures, the direct award and the in-house award are additional organizational modalities that the local authorities can choose. In this respect, article 166 of Legislative Decree No. 50 of 18 April 2016 – (Italian Code of Public Contracts) - establishes that the contracting authorities are free to choose the procedure that they consider more suitable for the award of the service.

The aim and methodology

The approach to the issue is not limited to the comparison of abstract regulatory models: it is rather focused on the impact of the choice to derogate from public tender. The latter model triggers application of consolidated rules: application of specific requirements and compliance with the general principles of transparency, non-discrimination and equal treatment laid down in the Treaty on the Functioning of the European Union (TFEU). On the other hand direct assignment of contracts may allow to deviate from the most consolidated and, presumably, efficient model. In this respect - the Italian independent authorities Autorità Garante della Concorrenza e del Mercato (AGCM), Autorità Nazionale Anticorruzione (ANAC) and Autorità di Regolazione dei Trasporti (ART) have formulated remarks on the interpretation and definition of the applicable regulations.

Thus, in the course of their respective institutional activities, the aforementioned authorities deliberated on 25 October 2017 a Joint Report on the procedure for the direct award in the regional railway transport. More specifically: the Report requires to carry out proper information procedure and specific grounds for a lawful decision of proceeding with direct assignment of contracts in this market. Furthermore, the obligation to express the grounds for direct award is particularly stringent in presence of two or more expressions of interest. This requires a comparative analysis of the presented expression of interest and, in the absence of a specific methodology, the competitive comparison with negotiation or the competitive dialogue referred to in the article 63-64 of the Code of Public Contract are the preferred methods to be followed in this regard. It can be argued that the competitive procedures can improve the quality of public service, requiring new solutions which can be offered by the market. Finally, the necessity of motivation is also indicated in the Report of 25 October 2017: the authorities must specifically justify the choice in favor of a direct award instead of public tender, with regard to the principle of impartiality and equal treatment.

Results expected

The purpose of this study is to verify the compliance of the direct award procedures carried out subsequently to the Report of 25 October 2017 with the Report itself: the AGCM has decided to initiate an investigation procedure with regard to the companies Ferrovie dello Stato S.p.A., Rete Ferroviaria Italiana S.p.A. and Trenitalia S.p.A. to ascertain an abuse of a dominant position in breach of article 102 of the TFEU in relation to the direct award on Trenitalia of public transport rail services of regional and local interest by the Veneto Region. This and other procedures will be evaluated in order to ascertain the status of compliance with UE and Italian legislation and to propose actions to encourage competition and improve quality of the services.

On Which Grounds Could We Build a Regulation of Rail Maintenance Workshops?

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Rail maintenance workshops (RMW) may look like essential facilities but they combine two major characteristics which build a very singular challenge to define appropriate regulatory rules.

Like rail network regulation, RMW regulation has to tackle the capacity issue, which is even more complex to grapple if RMW are supposed to handle different types of trains, with different types of maintenance schemes, specifically used by different TOC.

But RMW are also industrial facilities, with asset management, depreciation policies, (two factors in common with rail network) with idle times due to shunting movements of trains inside the facility barring a 24/24 7/7 use of industrial assets. It also has to comply with rules of law on work conditions which forces a kind of coordination assumes by the RMW head towards its partners or subcontractors

Regulation of RMW has therefore to tackle several non straight forward issues:

-What could an accountable cost basis? How to split idle times among different customers?

-How to benchmark cost of different RMW as their performance is largely due to their track design which may enhance or reduce idle times?

-How to design a WACC? Should it generic or tailored to each RMW?

-What could be a performance regime when an RMW handles trains from several RU? Specifically, when a train od RU A enters with a delay and forces to change the program of the workshop, what link could be done with the delay or a train going out of the RMW 2 hours later?

Presentation would suggest several options to face these challenges:

-Build commercial contracts only without regulation?

-Each RU has its own facility

-For PSO, transfer the RMW to the Transport authority so that the regulatory challenges of the performance regime are internalized by the AOT.

This paper is a step in a personal reflection on this very complex issue and comments and debates are warmly expected and welcome.

Competition in Railway Passenger Services in Europe: the Experience of Small and Medium Size Newcomers in Long Distance Services

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In the passenger railway services industry, there are two ways to introduce competition in long distance services. Firstly, competition can be introduced in the form of tenders for the provision of the service (competition for the market". Secondly, more conventional competition can be introduced opening the market to all interested payers (competition in the market of "on track". Although many passenger rail markets in the EU are already open to "on track competition", in very few cases substantial market entry has really occurred, and when it has taken place, it has often been on a single line of the rail network, on a small scale, by small operators specialized in niche markets or medium-sized companies that compete intensively with the public operator in that line.

Two are the objectives of the paper. On the one hand, analyze the cases of these small and medium-sized passenger rail companies and the reason for their entry only in niche markets or on a single line of the rail network. On the other hand, study the strategies to compensate for the disadvantages caused by the small size. In the paper, the strategy of new entrants in Germany, Sweden and Italy will be analyzed in detail to extract conclusions about their strategy and their results.

The main result of the paper will be a detailed description of the strategies and results of small and medium size new comers in the European Union.

An explanation for the strategy of the new comers in some cases will be that further expansion is limited by legal barriers related to the existence of public service obligations: only profitable lines are open to competition. For this reason, new undertakings can only enter these lines. Therefore, they are not voluntarily disregard the rest of the market.

Small and medium-sized companies have compensated for their size disadvantages with improvements in their management, lower costs of their productive resources and intermodality strategies with bus transportation. The creation of an intermodal railway network of buses and trains, created by the new operators, may be one of the unexpected results of the liberalization of railway services in Europe.

Developments in Rail Regulation in Britain

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An unexpected outcome of rail reform in Britain has been a large increase in costs, mainly in infrastructure but also in train operations and the problem in terms of infrastructure costs has become even worse in recent years, with large overruns on renewal and enhancement costs. At the same time, the regulatory system has been affected by the reclassification of Network Rail as a public sector company, and therefore now subject to the usual financial controls by the relevant government department, the Department of Transport. The result has been a major change in how the industry is regulated, with the Department for Transport imposing cash limits on spending and taking direct responsibility for approving and monitoring enhancements. At the same time, Network Rail has been reorganised as a set of routes plus a systems operator, with route management taking much greater responsibility. The result is that Network Rail will be regulated at a route level, with use of benchmarking and reputational incentives. At the same time new arrangements to bring together infrastructure and train operations are being included in all franchise competitions to try to deal with the issue of misalignment of incentives identified by the McNulty report as a key factor, playing an important part in cost increases. These will build on the experience of the Wessex 'deep alliance', in which the relevant route of the infrastructure manager and the train operator were managed by a single management team under a single Managing Director and with a sharing of changes in costs and revenues. But they will be more complex in that they will include routes where, unlike Wessex, there is a currently no single operator, so either the franchise map has to change, creating bigger operators (and there is evidence that bigger franchises are not good for efficiency) or a situation has to be tolerated in which the infrastructure on some routes may be controlled by a train operator not running most of the services (which may not be good for vertical integration).

This paper discusses developments in rail regulation in Britain, from the original approach in which an independent regulator was responsible for regulation of a private infrastructure manager with minimal government involvement, through the period in which Network Rail was regarded as a not-for-dividend private company to the current day, when it is seen as a publicly owned company and the government is heavily involved in its regulation. It is concluded that, whilst regulation of the efficiency of the infrastructure manager is needed, the success of the process in Britain has been at best mixed. One key issue has been misalignment of incentives between the infrastructure manager and train operating companies. A variety of approaches to this have been tried in Britain, but none is straightforward and they would not necessarily be appropriate in the circumstances of other countries.

Main Causes of Success of Italian Open Access Competition on High Speed Railway Market and Its Comparison with the French Market

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The arrival of a new operator on the Italian High Speed Railway (HSR) market, its maintain on the market and its market share made Italian open access experience one of the most successful liberalization model in the HSR sector. Researchers suggested that since the entry of the new operator in April 2012, Italian HSR market evolution is due in an important part by the presence of a new HSR operator. Actually, the positive evolution of HSR market between the two main Italian cities during the last 6 years is commonly related to the arrival of the alternative operator even if it is not in accordance with different theories that may consider the success of NTV as counterfactual. The aim of this article is to establish another kind of explanations for the success of NTV even if it is in opposition with the theory. This research proposes a complementary analysis in order to know what makes Italian HSR liberalization successful by making a comparison with another successful HSR market that is not already liberalized: the French HSR market. After retracing supply, demand and maturity of each market with respect to the opening of HSR infrastructure of two specific lines (Rome-Milan and Paris-Marseille), this article found that trends of supply and demand in both markets are very similar, if not identical after the commissioning of HSR services. Therefore, the observed evolution in Italian HSR market is also observed in French market which may suggest that liberalization might not be the only element that explains the success of new arrival in Italian market. The big changes in infrastructure may lead to positive trends that could prevail during some years after the opening of new infrastructures until each market finds its maturity. Actually, this article also suggests that maturity of the market is also a main variable that might explain the success of Italian new operator. In opposition with what was observed on French lines, Italian market had an important residual capacity (in terms of supply and market share) that permitted new arrival to capture an important market share. According to these conclusions, it might be very difficult to observe a similar evolution on French lines after liberalization because of the maturity of its HSR market and because of the age of most of the French HSR network.

Regulating Rail Investment and Social Preferences: Recent Trends Regarding Climate Change

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Public investments are not driven exclusively by maximizing financial returns. Welfare considerations are also important for them. A benevolent authority is supposed to maximize the social welfare. For the transport sector, it notably means that the transport policy must consider the externalities of each transport mode. One of the most common methods to introduce an economic regulation of public investment is the cost benefit-analysis (CBA). This method, based on a complex engineering, has been developed by economists to identify which projects to undertake. For the transport sector, it allows economists to use a monetized value of time savings or environmental damages, such as global warming.

In France, the economic regulation of public investment is relatively sophisticated. CBA is traditionally mandatory for major public investments like building new railway lines. The result of this analysis is used to demonstrate the social utility of the investment – for instance, it is considered by the judges when it has to judge the legality of expropriation measures. It is therefore important to provide guarantees of independence by an appropriate regulation of the evaluation process. In France, for instance, every evaluator has to follow a common framework published by the Government. Moreover, in order to avoid any “optimistic bias”, an independent review of the CBA is systematically undertaken for every major public since 2013. Independent experts committed by the services of the Prime Minister perform this review.

The cost-benefit analysis values nonmarket costs and benefits. The economist enlarges the scope of his discipline. With this evaluation, the economist implicitly deals with social preferences. It explains why the framework used for public assessment must be regularly updated in order to reflect the current social preferences of the society. For the evaluation process, it also means that the social value of an investment can change with the collective preferences and the political priorities of the society.

In our paper, we investigate the effects of the growing preoccupation of the society on climate change on CBA. Climate Change is increasingly worrying in the society. It is perceived by many stakeholders as one of the main issue for public investment, in particular in the transport sector. In this context, we point out several factors that recently increased the weight of environmental issues in the cost-benefit ratio. We illustrate this result comparing the relative importance of environmental factors in the CBA of different rail investments applying the successive French guidelines from 1994 to 2018.

Three factors explain the growing role environmental factors in CBA: i) the social cost of carbon has been revised upward, ii) there is now a consensus to apply the Hotelling rule to the value of carbon (the percentage change of this cost should equal the discount rate), and iii) an extension of the evaluation horizon increases the weight of long term environmental effects in CBA.

Then, our paper shows that these factors are partly offset by an opposite trend which induces a reduction of the weight of climate change in rail investment. The increasing value of the social cost of carbon is the consequence of the French objective in terms of CO₂ emissions. It means that a corollary of this high social cost of CO₂ is an ambitious objective of CO₂ emissions reduction. After Paris Agreement, the French objective is to reach carbon neutrality in 2050.

For the transport industry, it also says that every mode of transport will have to be decarbonized. Stated differently, the comparative advantage of rail transport in comparison with other modes will be negligible in the long term. Therefore, for the CBA, this situation produces a paradoxical conclusion: the increasing value of social cost of carbon does not necessarily yield to a larger social value for rail investments since the gap between rail emission factor and road emission factor has to be reduced, otherwise France will not be able to reach its objective of CO₂ emission reduction.

Potential Effects of Changes in Railway Access Charge Regimes: an Italian Case Study

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The views expressed are purely those of the authors and may not in any circumstances be regarded as stating an official position of the European Commission.

Since March 2017 Eva Valeri is employed at Autorità di Regolazione dei Trasporti (the Italian transport regulation authority), but this article presents the results of former research and does not represent the views of the authority.

Abstract

An appropriate access charges regime represents the basis for implementing an open market and for guaranteeing fair competition in the rail sector. In accordance with the recent European and national legislations, the Italian rail infrastructure manager has lately presented a new charges scheme with a better cost orientation and deeper market segmentation based on the ability to pay. This contribution describes and compares in detail the new and the previous regimes, presenting an empirical case study on two selected Italian corridors (Milan-Bologna and Bologna-Ancona); for each OD along of them several parameters are calculated, such as number and typology of the services, travel times, ticket prices and access fees with the old or the new procedure. For each OD couples (differentiated by rail service), several parameters have been defined and evaluated: 1) the number of trains, 2) a proxy for the comfort related to the category of the service, 3) the ticket price per km travelled, 4) the travel time per km, and 5) the access charge per km travelled calculated with both the new and the old approach. Then, according to the particular scenario, some of these parameters have been selected as inputs or outputs in order to obtain, by means of the DEA, the ranking of the most efficient OD relations (rail connections differentiated by service) for the IM, ROs and Transport Regulator. Indeed, interesting insights are added by applying a Data Envelopment Analysis to rank the efficiency of the rail segments taking into account the different points of view of stakeholders such as infrastructure manager, rail operators and rail regulator. In general, the outcomes show variability in ranking the OD relations across scenarios and access charge schemes. In particular, based on how the scenarios were set, the results show that HS services better respond to the needs of IM or Rail Regulator while, especially with the new charges scheme, the considered ROs perspective ranks better short connections by regional trains. Such kind of analysis could help policy makers, transport authorities or railway stakeholders to identify where and how benefits could be gained or lost and by whom.



The Liberalization Process of European Railways. The Convergence between Normative Progress and Operational Developments

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The paper proposes to combine an analysis of the operational structure with an analysis of the regulatory framework. The analysis of the operational structure aims to collect broadly and at disaggregated level by country the evolution of the various network components. A joint perspective of supply and demand that allows observing the changes experienced in the European national monopolies during the period of liberalization. The analysis of the regulatory framework, which is planned for the same period, provides the institutional changes that have occurred in the rail systems of those countries. It is therefore a matter of establishing a parallel evolution of operational and normative changes and seeing how the latter explain the former.

The liberalization process of the railway sector began in 1991 with Directive 91/440, since then up to four packages of directives have been necessary to be able to adapt this regulation to the transport policy objectives established by the EU. The rail freight sector was opened to competition in 2005 in the international arena and in 2007 in the domestic market; the passenger operation was opened to the international market pending its opening to the national market by 2019-2020.

The results in terms of efficiency or productivity have not been clearly demonstrated. In this way, the aforementioned studies deal with three fundamental elements for the analysis of productivity and efficiency: analysis of outputs, (Thomson and Bente, 2014) and inputs through the production frontier model measuring the effect of the new regulation in the results of the network (Friebel, Ivaldi & Vibes, 2010). In this line, Jensen and Stelling (2007) offer a long-term analysis of the cost data of the rail sector in Sweden to check the behaviour of costs through regression models. They emphasize that there is a positive impact in terms of efficiency for the case of Sweden, highlighting that the positive results of the competition can only be obtained in the long term, in periods of ten years or more.

None of them presents clear and extensible evidence to the European level about the improvements produced by the liberalization process that occurred in the railway in Europe. The econometric studies compiled by Nash et al (2015) also do not shed light on the benefits of the process and indicate:

1. That there is no consensus on the impact on the efficiency of the sector from vertical separation, the results vary depending on the different techniques used either data envelopment analysis (DEA) econometric analysis or through the measurement of efficiency or productivity (Cantos et al 2013).
2. Mizutani and Uranishi (2010) obtain in their study that vertical separation reduces costs in the network utilization levels defined as low but these increase in high levels, partly due to an increase in transaction costs (Merket et al., 2010).

The Mismatch of National Governance Mechanisms in Cross-Border Passenger Rail Transport – Which Role for Regulation? Examples from German-Polish and German-Czech Border Regions

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Among the European Union's key objectives is the idea of territorial cohesion and the abolishment of separating effects of state borders. Regarding passenger rail, quality of transport connecting metropolises in two different countries is poor compared to the same kind of services within nation states (cf. Lüttmerding and Gather 2013). This difference applies mainly to the number of regular daily connections, average speed and a certain amount also to the number of necessary changes of train.

Since the fall of the Iron Curtain, long-distance cross-border rail between Germany at its two Eastern neighbours has gradually been cut down, even though both Poland and the Czech Republic have joined the EU in 2004. Most of the existing cross-border connections between bigger regional centres, that would by definition be classified as long-distance, now are being served by regional trains. The latter mostly do not provide adequate rolling stock, and services often suffer from both low frequencies and average travel speed.

This working paper presents the outline of a PhD project which is to produce an overview of the functioning of the passenger rail regimes in Germany, Poland and the Czech Republic, concentrating on its implications on the organisation of cross-border passenger rail services. This study will allow answers to the question whether and at what point there is a need to adapt the national and the European regulation regimes in order to improve cross-border rail transport.

In this paper, the research approach, methodology of the PhD project will be detailed. Preliminary findings from an analysis of the national governance regimes in Germany, Poland and the Czech Republic will be outlined. Special attention is paid to the structures and rules of procedure for the organisation of services, as the different forms of tendering and Open Access in the three countries.

Current research in different scientific disciplines shows the deficiencies of unbundling, pointing out a misalignment of incentives in the regulation of railways (Van de Velde 2015), or, a mismatch of governance mechanisms in the transport sector (Sack 2011). Thus, if there are already inconsistencies within national transport governance regimes, the risk of occurring mismatches must be even stronger in multi-level governance regimes as the European rail sector.

As a theoretical basis, this project uses the heuristic perspective and toolkit of actor-centred institutionalism and Multi-level Governance. It works with the hypothesis that a large part of the shortcomings in cross-border passenger rail can be explained by existing mismatches between different national rail regimes. The aim of the PhD project is to show a) how mismatches have grown out of the specific national ways to implement European railway regulation, b) how these mismatches can be characterised and c) eventually to clarify if there is a need to adapt the national and the European regulation regimes.

This paper reflects only a preliminary result of ongoing work. An overview of the relevant EU legislation is presented with focus on Regulation 1370/2007. As a first outcome, the different national interpretations of this Regulation are found to be problematic.

Some Issues on the Access to the Lease Market of Railway Rolling Stock in Spain

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Even though the European legislator continues to boost the efficiency and competitiveness of rail transport services in Europe, the specificities of the sector are still an obstacle on free competition among real or potential railway operators that are prevented from competitive access to the market for rail transport services owing to the existence of barriers to the entrance to said market. In Spain, one of them continues to be the access to rail rolling stock, in particular, to locomotives. Not only by the high cost of acquiring the rolling stock and the long deadlines for its manufacture and authorization for placing it in service, but also by the existence of technical differences in the rail network, specifically with regard to the track gauge or the different signaling and traffic control systems, which make the manufacturing of a rolling stock that falls out of the scope of national level difficult. Therefore, its rental is naturally considered the most beneficial alternative to the acquisition of rolling stock in property for railway companies wishing to provide rail transport services. Nonetheless, it should be noted that the market for the lease of rolling stock is not widespread in Spain, unlike other European countries. There are only two companies engaged in the purchase of railway rolling stock for its subsequent leasing. On the one hand, there is Trains Iberia S.L, which has their locomotive pool leased as a whole. On the other hand, the state commercial rolling stock leasing company Renfe Alquiler that is fully owned by the incumbent Renfe Operadora and has the legal obligation to provide railway rolling stock market access to third parties under objective, transparent and non-discriminatory conditions, pursuant to the 16th additional provision of the Railways Act No 38/2015, of 29 September. Accordingly, the leasing of the rolling stock that this latest company can provide to third parties is, in short, the only opportunity to access to the lease market of railway rolling stock in Spain nowadays. It is specifically this, the realm of protecting the right to access to railway rolling stock of Renfe Alquiler on a non-discriminatory basis on which the aim of this paper is focused due to the fact that the establishment of market access conditions that are not acceptable to railway undertakings or that allow them to access it under unfavourable conditions might restrict or distort competition in the downstream market for the provision of rail transport services. For that purpose, it is assessed the content of lease agreements by which Renfe Alquiler can make rolling stock available to third parties, regarding the decision of the the Spain's National Authority for Markets and Competition of the 23 of May 2018. This refers particularly those contractual clauses that are inappropriate to this kind of leases due to they increase the costs of leasing rolling stock and, therefore, can affect the competitiveness of the lessee railway undertakings.

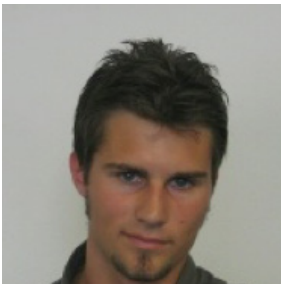
Regulatory Challenges for Open Access Passenger Rail Competition in the Czech Republic

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This paper analyses the regulatory challenges for open access passenger rail competition in the Czech Republic. It starts with a brief history of open access competition in the Czech Republic, reviewing the early history of open access operations on Prague-Ostrava route and then it continues with more recent competition on the Prague-Brno line and the extension of open access services to Austria and Slovakia. The second part of the paper analyses the main impacts of open access competition on the market. These are analysed on the Prague-Ostrava line, where sufficient empirical evidence already exists. The analysis covers development of price and non-price competition, timetabling, service frequency, and departure competition. The last part analyses the regulatory challenges that have emerged as a result of open access competition in the Czech Republic. The first challenge is infrastructure capacity, where especially around the cities of Prague, Brno, and Ostrava capacity is becoming scarce. This has consequences for not only long-distance passenger trains but also regional and freight traffic. The second challenge is the issue of cherry-picking, where commercial operators have concentrated on the prime routes in the best times and are neglecting the less attractive connections. The third challenge is how to accommodate commercial and subsidized long-distance services in one network and how to deal with the many cross-subsidies that are present in the system. The fourth challenge is how to deal with frequent accusations of anticompetitive behaviour. Open access competition leads to frequent disputes among operators and resolving such issues quickly and effectively requires a dedicated and capable regulator. The fifth challenge is tariff integration. After the entry of private operators, the tariff structure quickly disintegrated because different operators had few incentives to accept competitors' tickets. The last challenge is the profitability and long-term sustainability of open access operations.