



# Open access for railways and transaction cost economics – Management perspectives of Australia's rail companies



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## ABSTRACT

With the aim to improve efficiency and value for money, in addition to tendered services the European Commission approach to rail organisation allows substantial open access rail services in both passenger and freight operations. This paper investigates, from a transaction cost perspective, whether the European approach is applicable to the Australian context, and more generally to all regions and types of operation. A key focus of this paper is on vertically integrated railways owned by mining companies who are increasingly encouraged to provide open access to their competitors. In addition to the policy perspective, our discussion also includes the views of senior rail managers.

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## 1. Introduction

Getting value for money in the provision of rail services is increasingly not only of vital importance to public transport authorities but also to various players in the freight transport chain. One way of achieving this is to ensure that there is sufficient competition in the rail market. The degree of vertical integration at the train operation/track infrastructure interface is central to the discussion for introducing competition, and hence providing adequate incentives to produce efficiently (high quality and quantity at low cost). Once one allows for competition, it becomes then a question of whether competition *on the tracks* (open access) is desirable for the entire network or whether perhaps part of the network and certain services (i.e., scheduled passenger rail services) should be procured through tendering; that is, competition *for the tracks* (franchise contracts). Such 3rd party access is usually opposed and lobbied against by the incumbent operator, regardless of whether that operator is a vertically integrated train operating company or a franchised passenger train operator (at least in

situations where the new operator would compete directly for traffic) that is separated from the infrastructure manager on whose tracks it runs train services on an exclusive basis (for a certain period of time). In both cases we have monopolistic structures, and open access is usually seen as a way of introducing innovation and incentives into the relevant market. While the entrant will bring in new product/services ideas, the incumbent will now be disciplined to operate more efficiently and to price according to market mechanisms rather than purely focussed on its internal cost/profit structure. While this may result in welfare improvements, it is sometimes argued that vertical separation, and in particular open access, will increase costs and may have detrimental side effects such as a lack of coordination, a loss of scale/scope economies, inferior long term planning/investment and particularly for freight, undesired knock-on effects on other elements of the supply chain.

The European Commission approach to rail organisation (best implemented in the UK), which is often referred to as a model that has resulted in substantial improvements in rail performance, but also to cost increases in some countries (e.g. McNulty, 2011), allows besides tendered services, for (regulated) open access rail services in both passenger (fully liberalised by 2019) and freight operations. Despite its federal and decentralised rail system, in Australia there is a trend to harmonise rail regulation, with safety regulation being governed by a new National Rail Safety Regulator (NRSR) from January 2013. In terms of economic regulation, the Australian

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Competition and Consumer Commission (ACCC) regulates most but not all economic and track access issues at the federal level, and there are voices that advocate that the open access approach should not only (as currently) be applied and enforced for large rail networks but also for privately run integrated freight railways, with a particular focus on those connecting iron ore mines with deep sea ports in the Pilbara (Western Australia).

The aim of this paper is to establish whether open access is, in the view of rail managers, appropriate for all train operations in Australia in terms of transaction cost economics. For that we undertook a survey of senior Australian rail managers in rail companies asking them for their views and experiences with the transactions that they have with infrastructure managers, regulators and other train operating companies. The paper is organised as follows. Sections 2 and 3 provide an introduction to the theoretical context of open access and an overview of the Australian rail market respectively. The methodology and sample are presented in Section 4, followed by a discussion of the main results in Section 5. Section 6 summarises our findings and offers some policy recommendations.

## 2. Theoretical background and setting the scene

The European approach to improving cost efficiency and to reduce the need for subsidies for railways is to introduce effective competition. The current European legislation (consolidated in its core in Directive 2012/34/EU), which will be strengthened by the fourth railway package in 2014 (it has not taken any effect yet, the legislative process is advanced but not finished), requires that all railways (except for local or regional stand-alone networks) have to be vertically separated, at least to the extent of having separate accounts and divisions for infrastructure, passenger and freight operations (but can be part of the same holding company). According to European law (EC COM(2010) 475) member states may exclude certain undertakings from the application of most of its rules related to infrastructure access, which includes, most relevantly to this paper, “undertakings which only operate freight services on privately owned railway infrastructure that exists solely for use by the infrastructure owner for its own freight operations”.

In cases where the management of the infrastructure is not independent of train operators, the directives require that key decisions on the allocation of capacity, and the setting of track access charges, must be taken by a third party. In principle there are a number of mechanisms available to facilitate competition in rail markets. One is to split the rail network horizontally and let a number of vertically integrated rail companies (i.e., train operation and infrastructure management under one roof) compete with one another. The second option is to separate infrastructure management from the train operations so that multiple train operators compete for track access capacity on a level playing field. The third option is to allow vertical integration, but to mandate that the vertically integrated rail company allows third parties (other train operators) to use its tracks (with that access being governed by track access agreements and slot contracts). This is usually referred to as open access, at least in the rail freight business. On the passenger side, open access also refers to circumstances where there is competition *in the market* (between different train operators sharing the same track infrastructure) as opposed to the franchise model where train operators compete *for the market* (through tendering). Open access is practised in all freight rail markets in Europe (which is legally opened up for freight and for international passenger trains). To some extent it is also permitted in passenger rail markets, with the pioneers being Sweden, Germany and the UK, but recently also starting in other parts of Europe (such as high speed train operator NTV competing with Trenitalia in Italy or open

access competition in the Czech Republic). In practice open access in the European passenger rail market can be classified into two approaches. The German and Swedish approach is that any operator can apply for infrastructure access and a neutral institution coordinates these applications and resolves conflicting applications based on objective criteria (full open access used as the precondition for free competition in the market). In contrast, in the UK open access in the passenger context is used for free competition for the capacities which remain after the franchising of passenger rail services (second-tier open access to spare capacities). In practice this means that if a potential operator identifies a new market for train services not currently served by a franchise, they can apply to Network Rail (the UK rail infrastructure manager) for open access rights to run those trains.

While it is widely acknowledged that complete separation of infrastructure and operations has the benefit of removing a prime motive for discrimination by the infrastructure manager, there is concern that it may raise costs. Econometric evidence from studies of the European experience (e.g., Cantos et al., 2010; Friebel, Ivaldi, & Vibes, 2010; Growitsch & Wetzel, 2009) does not yield consistent results. Hence, the most efficient degree of vertical separation of European rail systems is subject of an ongoing debate (e.g. Bougna & Crozet, 2013). Interestingly, for purposes of this paper, Mizutani and Uranishi (2013) found that cost savings of a vertically integrated organisation depends on train density, with lower train density tending to reduce and higher train density to increase cost, which led Van de Velde et al. (2012) to conclude that EU-wide imposition of vertical separation in rail would increase costs. This may be similar in the Australian context, and we conjecture whether mandatory open access, which essentially is a degree of vertical separation, is indeed cost efficient for all types of train operation and on all parts of the network.

Further to the cost discussion, there is the concern that contractual relationships between separated train operations and infrastructure management would result in higher transaction costs than in an integrated or a holding model (Growitsch & Wetzel, 2009; Pittman, 2005; Preston, 2002). Merkert's (2012) empirical results suggest that vertical separation indeed increases transaction costs,<sup>1</sup> but in a later study Merkert, Smith, and Nash (2012) reveal that even in the most extreme case of full vertical separation and open access, transaction costs at the train operation/infrastructure interface only account for three per cent of total operating cost. However, what they have also shown is that the transaction cost difference between more integrated and separated railways is largest for open access passenger operators followed by open access freight train operators (those not operating on their own tracks). This indicates that open access is a transaction cost critical issue, also confirmed by Merkert and Nash's (2013) qualitative findings that suggest that open access passenger train operators in Germany (who operate non-franchised passenger operations on track infrastructure that is to some extent integrated with the incumbent train operator Deutsche Bahn through a holding company model) perceive their environment much more uncertain and complex than their Swedish and UK counterparts (who run non-franchised passenger trains on the vertically separated national track network). This is also a result of weak regulation of the conditions of track access. Access rights are awarded only 9 months before the start of the operations, which makes it despite the fact that full open access is granted almost impossible to take the risk of investment into new rolling stock (at least at a larger scale).

<sup>1</sup> In line with Coase (1960), we define transaction costs in this paper as all costs resulting from preparing, negotiating, enforcing and monitoring contracts and rights.

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