



## BRIEFING PAPER

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# Rail structures, ownership and reform

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## Summary

This paper explains the various ways railways are structured around the world and sets out how rail structures in Great Britain have developed to date and prospects for the future.

In the early 1990s the Major Government initiated a radical structural transformation of the British rail system, one that is yet to be repeated internationally (the system in Northern Ireland is entirely separate, state-owned and state-run). Over a relatively short period British Rail was split up into over 100 private companies. The infrastructure ownership and management was privatised and rebranded under Railtrack, the rolling stock companies and freight sectors were also privatised and the passenger rail operations were let to private operators under 25 separate franchises. Over the next fifteen years there followed further reforms, partly due to the change of government but also due to issues following the Hatfield disaster and the collapse of Railtrack.

There are different views about how successful GB rail privatisation has been. Some argue that it never delivered on its initial promise to introduce on-track competition. Some assert that while private sector involvement has been beneficial, the lack of vertical integration between track and train has been a mistake. Whereas others maintain that the whole thing has been a failure – leading to inefficiencies, spiralling costs and high fares – and the railway should be brought back into public ownership.

Great Britain was the only country to adopt its specific model of operation and was the only country to completely divest itself of any public stake in passenger operations (Sweden would be the closest European comparator). A host of other models have emerged following the wave of international reform in the 1990s. Despite this, there is still no consensus on the optimum structural model for the railway industry.

Indeed, logically a single model could never be suitable across all regions. The [World Bank](#), for example, has argued that rail restructuring is a “pragmatic search for a model that works in specific markets and in which railway management objectives are reasonably aligned with national policy objectives for railways”. That said, cross-country evidence shows that there is a clear presence in almost all markets of a state-owned incumbent railway operator and infrastructure manager, particularly if passenger demand and service dominates the national rail network. Even in Sweden, where market opening has recently been taken to the point of including all train services, the state continues to be a major stakeholder in both operations and infrastructure.

Railway restructuring remains a controversial issue in Great Britain, twenty years after privatisation was completed. The Conservative Government is broadly supportive of the current structure, although Secretary of State Chris Grayling has said that he intends to bring back together the operation of track and train in some form. This is not a new idea – Sir Roy McNulty suggested it in his 2011 report on rail value for money. In contrast, the Labour Party is committed to bringing private rail companies back into public ownership as their franchises expire, as part of a wider renationalisation programme.

Information on other aspects of rail policy can be found on the [Railways briefings page](#) of the Parliament website.

# 1. Structural options and case studies

During the second half of the twentieth century, the most common structure for national rail delivery was a single, publicly-owned firm entrusted with the unified management of both infrastructure and operations.<sup>1</sup> The freedom to compete in supplying rail services was weak or absent from national rail industry structures in most countries.

Under this protective environment, during the 1970s and 1980s, many national rail companies incurred growing financial deficits. Cantos et. al (2011) explained that:

The main problems associated with the traditional policies for railways were increasing losses, which were usually financed by public subsidies, a high degree of managerial inefficiency and business activities oriented exclusively toward production targets rather than commercial and market targets.<sup>2</sup>

The sector's decline sparked a restructuring movement around the world, with the core objectives of improving service quality and cost reduction at the heart of these reforms.<sup>3</sup> Reforms were in some cases, such as in Japan and Sweden, implemented over many years; while others occurred in only a few years, as in Britain. There was no single template for reform, though changes can be identified around three core, interrelated building blocks:

- 1 **Business organisation** – the degree to which delivery institutions are to be structured in a business-like or commercial manner, including the option of private sector ownership;
- 2 **Market competition** – the degree to which the railway transport services it produces are to be competitive, as between different rail service providers; and
- 3 **Separation** (either horizontally<sup>4</sup> or vertically) – the degree to which its monolithic nature should be broken down and some of its sub-businesses be separated and decentralised.<sup>5</sup>

Countries have typically either opted to retain infrastructure in public hands, creating government management agencies to regulate private train operators; or have established nominally independent but government-owned enterprises to manage tracks and trains. In terms of market competition, reforms have been very different all over the world and, where introduced, have been done by directly facilitating the free entry of new companies into the railway network; or to foster

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<sup>1</sup> It would typically operate as a department of a ministry, or a public entity with an administrative reporting relationship to that ministry

<sup>2</sup> Cantos et. al, Universitat de València, [Quantifying the benefits from structural reforms in railway transport markets in APEC economies](#), 2011, p103

<sup>3</sup> Nash, C., "Passenger railway reform in the last 20 years – European experience reconsidered", *Research in Transportation Economics* 22, Volume 22, Issue 1, 2008, p67

<sup>4</sup> Institutional separation between passenger operations and freight operations; also institutional separation between (vertically integrated) passenger operators, as implemented in Japan

<sup>5</sup> World Bank, [Railway Reform: Toolkit for Improving Rail Sector Performance](#), 2011, p66

competition for the market by means of a franchising or concessions system in which companies compete for the right to use and/or operate the infrastructure during a certain period of time.

Because of these changes railways now come in all shapes and sizes: vertically integrated, vertically separated, with or without competition, public and private, passenger or freight dominated or mixed, supported by subsidies or fully self-reliant. This section of the paper outlines these models and their variations, as well as their broad costs and benefits with reference to specific case studies internationally.

It should be noted from the outset that there is no model of operation that is universally accepted as being optimal. The preferred model is highly dependent on a country's circumstances and its success is dependent on a number of other local political, economic and social factors which are discussed at the end of the section.

## 1.1 Vertically integrated

For a given rail service and piece of infrastructure, the term "vertically integrated" is used to refer to the situation in which the owner of the track infrastructure is allowed to provide the given rail service over that infrastructure.<sup>6</sup> It remains the case that, outside Europe, most railways retain the vertically integrated structure but have moved away from the traditional model of a single, publicly-owned railway.

### Fully integrated, publicly-owned monopoly

This is the traditional model of railway organisation where a single, publicly-owned entity controls all or the vast majority of the infrastructure facilities as well as the operational and administrative functions. A number of countries still operate this model of railway, most notably [China](#) and [India](#). There are, however, variances of this model based on the business organisation.

Many of the archetypal railways prior to the reforms of the late 1980s and early 1990s, were run as and by **public departments and authorities** which, according to the World Bank, were "ill-equipped to compete in a tough external business environment".<sup>7</sup> This is because they were often captive to 'bureaucratic pressures' rather than commercial incentives, described by the World Bank as:

- accountability measured-by-process ('box-ticking') rather than results;
- vulnerability to short-term national budgeting processes that destabilise longer-term business and investment planning;
- public service employment norms and procedures that impede commercial operations; and
- political patronage or seniority as a basis for selecting board and senior management, rather than merit; and other constraints.<sup>8</sup>

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<sup>6</sup> "[Structural reform in the rail industry](#)", *OECD Journal: Competition Law and Policy* No.3, Volume 8, Issue 2, 11 October 2006, p86

<sup>7</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p67

<sup>8</sup> Ibid., pp67-68

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These railways can also be bound by political pressures that lead to what might be considered perverse *commercial* outcomes (whatever other rationale there might be), such as maintaining artificially cheap fares for passengers, running trains where passenger demand is very low, or reallocating investment to areas of greatest political visibility. This led Russell Pittman to conclude that a broad consensus had emerged that the traditional arrangement of a state-owned monopoly railway was “inefficient and unworkable”.<sup>9</sup>

To overcome this, other models of business organisation have been developed.<sup>10</sup> For example, a **state-owned enterprise (SOE)** may be established by a specific railway law or under a general SOE law which specifies an enterprise’s commercial orientation, objects and freedoms, and channels for political influence. As pointed out by the World Bank, this form of organisation needs “shoring up” to create a more business-like structure with the following measures:

- a professional and independent board of directors;
- merit-based management selection;
- management accountability based on short- and medium-term business planning targets;
- creating business management structures geared to markets and focusing on core functions;
- greater pricing freedom;
- use of internationally recognised commercial accounting and auditing standards; and
- contractual agreements between enterprises and government for reimbursement of public service obligations imposed by governments.<sup>11</sup>

Alternatively, if a government wants an arms-length relationship, it can establish and register a **state-owned company (SOC)** using a formal joint-stock company constitution drawn up according to corporate law; this would include a board of directors (selected for reasons such as their business skills and industry experience, plus independence from the policy ministry) to establish and monitor the company’s direction and strategy to enhance profitability or otherwise ensure a return on shareholders’ funds. Arm’s length distance from government can be achieved by vesting all or part of the shareholding in another Department separate from say a country’s transport department and without line-ministry political accountability. This would make it less-likely to succumb to political pressure or avoid unpopular decisions.<sup>12</sup>

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<sup>9</sup> Pittman, R. “[Options for restructuring the state-owned monopoly railway](#)”, *Research in Transportation Economics*, vol. 20, issue 1, 2007, pp179–198; Mr Pittman is Dir. of Economic Research at Antitrust Division, U.S. Dept. of Justice

<sup>10</sup> It should be noted that the specific choice of corporate form are complex and will vary from country to country based on legalities regarding asset holding, accounting methods, taxation and transfer of staff to new entities

<sup>11</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p68

<sup>12</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p69

The principle argument in favour of having a fully integrated, publicly-owned monopoly, and which can be applied more widely to other integrated structures, is that the relationship between the services and rolling stock, as well as the quality, quantity and technical characteristics of the infrastructure, is so close that both aspects need to be planned together. Instead of planning, operation and investment decisions being split among multiple organisations, under a single, vertically integrated system, "all decisions can be taken within one company by one line of command".<sup>13</sup> It is thus argued that vertical integration enables optimisation for the system as a whole which "is difficult to achieve in a vertically separated railway."<sup>14</sup>

It is also sometimes argued that having a single operator creates for economies of scale in operations.<sup>15</sup> However, there is good evidence that rail systems are not subject to major economies of scale (i.e. whether track traffic volume is carried by a single operator or several) because of greater management complexity and loss of corporate agility as the scale increases.<sup>16</sup> They do experience economies of density, arising from declining average unit costs of additional traffic over a fixed railway infrastructure until capacity is reached.<sup>17</sup> That is, whoever provides the traffic, the more there is, the lower the unit infrastructure cost.

A fully-integrated system may also be favourable because it is more conducive to interchangeable ticketing. Additionally, there is evidence that a well-planned and integrated timetable offering regular interval services and good connections can considerably enhance traffic, revenue, and benefits.<sup>18</sup> Thus having a single operator might be better in terms of costs and attracting traffic than a fragmented passenger network with a variety of operators.<sup>19</sup>

As mentioned though, with a single, integrated and government-owned operator there is often a lack of clear commercial focus and lack of incentives to improve the quality of services. Independent regulation, in terms of setting performance and commercial objectives, is often proposed as a way of overcoming this lack of incentives. Yet, in the absence of clear commercial incentives, the use of financial rewards and penalties to incentivise good performance is, according to the OECD, "difficult, if not impossible."<sup>20</sup>

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<sup>13</sup> van de Velde, D., C. Nash, A. Smith, F. Mizutani, S. Uranishi, M. Lijesen and F. Zschoche for CER, [EVES-Rail - Economic effects of Vertical Separation in the Railway Sector](#), 2012, p26

<sup>14</sup> Op cit., "[Options for restructuring the state-owned monopoly railway](#)", pp179-198

<sup>15</sup> The average costs decrease as the size of the company increases

<sup>16</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p73

<sup>17</sup> Nash et.al, "[Comparing three models for introduction of competition into railways](#), [Journal of Transport Economics and Policy](#)", *Journal of Transport Economics and Policy* Vol. 47, No. 2, May 2013, pp191-206

<sup>18</sup> Johnson, D, Shires, J, Nash, C, and Tyler, J, "[Forecasting and appraising regular interval timetable](#)", *Transport Policy* Volume 13, Issue 5, September 2006, pp349-66

<sup>19</sup> Op cit., "[Comparing three models for introduction of competition into railways](#), [Journal of Transport Economics and Policy](#)", pp191-206

<sup>20</sup> Op cit., "[Structural reform in the rail industry](#)", p96

Another objection to this type of model is that there is no intra-modal competition. According to the OECD, “historical experience of many OECD countries is that in the absence of any form of intra-modal competition, the rail sector experiences low productivity, low service quality, under-investment and lack of responsiveness to consumer demands”.<sup>21</sup> The World Bank found that where competition was present, either in or for the market, “there were significant improvements in efficiency, quality and value-for-money.”<sup>22</sup>

### **Multiple, vertically integrated operators**

It is sometimes possible to retain vertical integration, and the previously stated benefits, but to have it horizontally separated across regional administrative units of the national railway. This tends to work best when there are clearly separable business units with discrete geographic focus. For example, larger countries have multiple railway markets (e.g. heavy-haul freight in a mining region, major urban centres, and regional networks), with each owned, managed and financed separately. This according to the World Bank, can “sharpen market focus and management accountability, and allow for specialised operations to be devolved, divested, or compete with one another”.<sup>23</sup>

Japan is the most notable example of this model when its previously singular structure was split into six separate business units following reforms initiated in 1987. It does, however, have a mixed ownership structure with the three largest rail businesses having been progressively

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<sup>21</sup> Ibid., p90

<sup>22</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p73

<sup>23</sup> Ibid., p76

privatised during the 1990s and 2000s, and a fourth more recently in 2016 (see box below).

### Case Study: Japan

In response to major financial and efficiency pressures, the state agency Japan National Railway was divided into six regional, vertically integrated passenger companies (JR Hokkaido, JR East, JR Central, JR West, JR Kyushu, and JR Shikoku – known as the JRs) and one nationwide freight company (JR Freight) in 1987.



Three of the JR companies (JR Central, JR East and JR West) were progressively privatised, between 1993 and 2006, and are now privately owned, joint-stock companies listed on the Tokyo Stock Exchange. Up to one third of the shares are held by foreign bodies. None of the three companies receive state subsidies. The Shinkansen line, being almost insolvent, was privatised and geographically divided. Ownership of each of the lines was distributed to the three private operators according to geographic location; though there is still some cooperation between these companies to provide Shinkansen services. In October 2016, all the shares of JR Kyushu were also listed.

The state has retained ownership of JR Hokkaido and JR Shikoku but the remaining government-owned passenger railways represent only a small share of total passenger kilometres. These public enterprises nonetheless act as private operators and seek to earn a profit like private companies. However, neither have been profitable and they receive public subsidies.

The six JR passenger lines own 87% of all Japanese railway track. The remaining 13% is divided among other privately owned railways, which operate mainly as regional commuter lines. Freight services are a secondary user and are provided by a company which does not own track infrastructure of its own. Only in very few cases do tracks of different passenger lines overlap. Intra-modal competition is therefore very low. Only in urban regions, such as the suburbs of Tokyo, does intra-modal competition arise from other privately operating railways that focus on regional transport. The main competition thus stems from inter-modal competition (i.e. road-based transport).

The government has a role in jointly planning rail infrastructure with private operators and approving the fares set by the JRs. The safety regulator is the Ministry of Land, Infrastructure, Transport and Tourism.

The results of the JNR reform have, according to Kurosaki (2016), been “outstanding” because of increasing transport volume, productivity, and sustainable management of the JRs, who have focused on their markets and specific regional needs. Although the transport volume (passenger-km) decreased 6% in the decade prior to JNR reform, the trend changed significantly, increasing to 27%, in the decade after the reform. According to Kurosaki “this success can mainly be attributed to privatisation and regional division, both of which solved the problems underlying JNR’s failure”.

Sources: Ishida, Y. (2011) *Japan, Reforming Railways: Learning from Experience*, CER, 23-30 and Kurosaki, F. (2016) *Reform of the Japanese National Railways*, Network Industries newsletter, 18(4), 8-11

As observed by the World Bank, “almost all private operation of previously state-owned railway services has improved market and commercial performance”.<sup>24</sup> Despite this, railway network privatisation

<sup>24</sup> Ibid., p71

or concessions have proven more daunting and less attractive as a public policy choice in countries where national railways have a strong passenger base. In Canada, Great Britain, New Zealand, and parts of Australia, some or all main-line railway infrastructure was transferred to full private ownership. Since then, Great Britain and New Zealand have essentially brought railway infrastructure back into public ownership, although train operations are still in the hands of private companies.<sup>25</sup>

### Vertically integrated concessions

For a railway that is mostly or solely a passenger operation, the choice for creating competition and enabling private sector participation in restructuring would seem to be between:

- auctioning a concession<sup>26</sup> for the integrated railway (that is, for infrastructure and train operations performed by the same franchisee); and
- auctioning a concession for train operations while making other arrangements for the infrastructure (as is the case in Great Britain).<sup>27</sup>

Under a typical concession contract the state maintains ownership of the land under the railway while transferring most other infrastructure and rolling stock assets and the right to operate rail services to a private company during the contract period. Concessions are usually longer-term arrangements which, according to the World Bank, “can take advantage of private sector investment and commercial management practices”.<sup>28</sup> Railway concessions can encompass the whole enterprise or specific enterprise components – freight operations, commuter services, or long-distance passenger services. As discussed further by the World Bank:

Concession contracts that include rail infrastructure are typically 25 to 40 years to allow the concession operator to invest in long-term assets to improve its performance. A concession contract can include government investment in assets, such as infrastructure or passenger rolling stock. Infrastructure concessions are exclusive – the concession operator has the exclusive right to invest, maintain, and operate the infrastructure. Sometimes concessions can also allow operating exclusivity, or they can require the concession operator to provide access to other train operators providing specific transport services (passenger, freight, or both).<sup>29</sup>

Fully integrated concession arrangements, particularly for passenger rail services, have not been widespread internationally,<sup>30</sup> particularly in Europe where current regulations require accounting separation between the infrastructure manager on the one hand and between

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<sup>25</sup> Ibid., p71

<sup>26</sup> A concession is a contract between a government owner and private parties to provide some agreed rail-related services

<sup>27</sup> Op cit., “[Options for restructuring the state-owned monopoly railway](#)”, pp179–198

<sup>28</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p200

<sup>29</sup> Ibid., p201

<sup>30</sup> Gangwar, R. et. al. “[Framework for structuring public private partnerships in railways](#)”, *Case Studies on Transport Policy*, Volume 3, Issue 3, September 2015, pp295-303

freight and passenger services on the other.<sup>31</sup> Where it has been done, it has seen “generally positive results”.<sup>32</sup> Latin America and Africa have led the way internationally in railway privatisation through concessions. Eight Latin American countries – Argentina, Bolivia, Brazil, Chile, Costa Rica, Guatemala, Mexico and Peru – developed private rail concessions to one extent or another in the 1990s.<sup>33</sup> In assessing the effects of concession arrangements in Latin America, the World Bank made the following observations:

Now over a decade since rail concessioning in Latin America began, the overall assessment of its results is positive, particularly for freight railways. Railway traffic volumes have climbed, with some improvements in surface transport market share. Although numerous data problems exist, measures of productive efficiency almost uniformly show post-concession improvements in cargo transport. Effects on rail rates and service levels have generally received positive reviews. Evidence is less extensive for passenger services, mostly because concessioning was largely limited to commuter services in Argentina and Brazil and because such concessions must be evaluated in terms of complex subsidy and regulated pricing regimes, rather than as market-based private enterprises. Railway concessions have not revived uneconomic intercity passenger services, nor has there been much effort to do so.<sup>34</sup>

## In-market competition between integrated rail operators

Conventional “in-the-market” competition between integrated rail companies is possible under certain circumstances. For example, competition for rail services over an origin-destination pair is possible when the origin and destination happen to be connected by two different rail routes, over infrastructure belonging to two competing rail companies. This is sometimes called competition over “parallel tracks”.<sup>35</sup>

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<sup>31</sup> The Netherlands procures its operations and infrastructure by way of concessions, but they are vertically separated, for more information, see: Vosman, Q, [Dutch concessions: the ministry asserts control](#), March 2015

<sup>32</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p200

<sup>33</sup> Martin, B. for the International Transport Workers’ Federation, [Railway privatisation through concessions – the origins and effects of the experience in Latin America](#), 2002, p2

<sup>34</sup> World Bank, [Results of Railway Privatization in Latin America](#), Transport Papers, TP-6, 2005, p.vii

<sup>35</sup> Op cit., [“Structural reform in the rail industry”](#), p97

Restructuring to promote competition between vertically-integrated rail companies is more likely to be effective for freight, rather than passenger-dominated railways. This is because passengers (especially business travellers) tend to be more time sensitive and less able to substitute for alternative origin-destination pairs.<sup>36</sup> Even in freight-dominated markets, it may be difficult to restructure the network to favour integrated competition.

### Case Study: North America

In North America it has been possible to sustain competition in-the-market between vertically-integrated railroads, but mostly in the freight context.

This type of competition can be important for freight transport between city pairs and for freight transport involving a sea leg – in this case two railroads serving the same origin but different ports will compete, to a degree, with each other. This approach has, at least in North America, been able to deliver a degree of competition with relatively little regulatory intervention.

Perhaps the clearest example of competition over parallel tracks can be found in Canada. Canada has two major transcontinental railway systems, which are owned and operated by two separate private companies, the Canadian National Railway (CN) and the Canadian Pacific Railway (CP). Both cover the entire southern region of Canada from the Atlantic to the Pacific. Most of the major Canadian cities, including Vancouver, Calgary, Edmonton, Saskatoon, Regina, Winnipeg, Toronto, Montreal and Quebec, are served by both railways. However, nation-wide passenger rail services are provided by VIA Rail Canada, a Crown corporation (State-owned company providing commercial services), over the networks that are owned and operated by CN and CP.

The United States has seven privately-owned, vertically integrated freight railways. There is a substantial amount of literature from the US that the degree of competition between competing vertically-integrated US railroad companies has a direct impact on rail freight rates. As might be expected, studies have shown that the wider the choice of railroads faced by any one shipper, the lower the freight rates. Intercity passenger rail services are provided by the publicly-owned railway corporation Amtrak, which operates over the tracks of the freight rail networks. Amtrak also owns some of its own track in the North East. In order to have effective competition between railroads, different rail paths must be owned and operated by different railroad companies. Careful restructuring of an integrated railroad can increase the number of alternative rail paths over major traffic routes. In Mexico, for example, the national railroad was split into three railroads. All three railroads serve Mexico City. The two northern railways both serve ports on the Gulf of Mexico and on the Pacific and both extend as far as the border with the US to the north.

*Sources:* OECD (2005) [Structural Reform in the Rail Industry: Mexico and United States Chapters](#), Policy Roundtables and Clausen, U, and Voll, R. (2013) [A comparison of North American and European railway systems, European Transport Research Review](#), 5(3), 129-33

Firstly, competition over parallel track requires the existence of two or more train paths over the major traffic routes. In a country such as the UK, or across Europe more generally, land-use density is quite high which makes the reservation and acquisition of land for rail expensive. Even where parallel tracks exist, separation of those tracks into competing companies may reduce efficiency and increase fragmentation, potentially undermining the ability of companies to offer a single end-to-end service. According to Pittman writing in 2007 there were probably only three countries in the world which were “obvious candidates for a restructuring plan that would create multiple vertically

<sup>36</sup> Ibid., p104

integrated railways competing among themselves in parallel fashion and at common points: Russia, China, and India".<sup>37</sup>

## 1.2 Intermediate models

### Horizontally separated and devolved

An alternative model is to horizontally separate rail operations. This can facilitate policy decentralisation and involve devolution to sub-national government authorities the funding responsibility for any separable regional or suburban rail operations. This option gives responsibility and accountability to those communities with the greatest stake in providing services and finding the resources to sustain them.<sup>38</sup> There are several variants of this option, which may or may not be vertically integrated:

- 1 Local authority may offer a concession or franchise through competitive bidding for delivery of regional or suburban services. In principle, the national public company might compete with private train operators for the concession, which could include local rail infrastructure. This type of train operating concession would typically be re-bid periodically to ensure competition;
- 2 Train services can be divested to the local authority and run on the centrally-owned network under network access agreements; or
- 3 Both the local network (if it is reasonably separable) and the train services can be devolved to the local authority.

It should be noted that this option only works if sub-national governments have the financial and administrative capacity to fulfil the functions. A number of European countries have adopted this form of governance and business organisation, most notably in Germany where franchises are handled by thirty-three regional authorities. The most prominent example of devolved services in Great Britain are those in London, in which Transport for London, through its subsidiary London Underground Limited, is responsible for operating the London Underground train network and owns (in whole or in part) more than 250 stations. It also manages the London Overground network, although Network Rail has responsibility for managing the track infrastructure for that network.

### Holding company model with mandated access

Under the holding company model,<sup>39</sup> infrastructure manager and operator are distinct companies, but both are part of a same holding, or somehow controlled by the same 'parent' company. This may take the form of:

- 1 two separate state-owned companies (Spain, France, the Netherlands);

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<sup>37</sup> Op cit., "[Options for restructuring the state-owned monopoly railway](#)", p189

<sup>38</sup> Op cit., [Railway Reform: Toolkit for Improving Rail Sector Performance](#), p79

<sup>39</sup> Internal separation of an infrastructure division from train operating divisions within a railway company, or as companies within a holding structure, is not vertical separation but a means of managing vertical integration

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- 2 separate companies within a state-owned group of companies (Germany, Italy); or
- 3 divisions of a single state-owned company (Switzerland).<sup>40</sup>

It is argued that the costs may be lower under this model than a fully vertically separated structure and that they may, more widely, be reduced due to the avoidance of misaligned incentives because transactions remain between parties whose ultimate interest is the profitability of the company as a whole.<sup>41</sup> A problem with separated structures, in that each company will seek to optimise its own operations.<sup>42</sup> Mizutani et. al (2014) found that the holding company model does reduce costs compared to vertical separation but this effect is small (around 5%).<sup>43</sup>

This model typically includes 'mandated access', where the owner/operator of the infrastructure is required to provide access to the infrastructure to an independent train operator at regulated terms and conditions for the purpose of providing the given rail service over that infrastructure.<sup>44</sup> The primary potential benefit of allowing independent train operators access to the track is that it enhances the scope for competition, thus increasing the probability that an efficient and high-quality rail service is offered.

However, the scope for competition from conventional in-the-market new entrants may be limited by a consumers' preference for higher-frequency services. This preference is particularly strong on short-to-medium distance services, operating over distances of less than 200 km. For services up to 800 km, frequency of service is likely to be a less important consideration for end-users; though domestic route densities have to be at a certain level for in-market competition to be feasible.<sup>45</sup>

Thus, the likely level of in-the-market competition that will arise in a regime of mandated access would be modest<sup>46</sup> and there are very few examples of sustained in-the-market competition between passenger train operators. For example, in Germany (which has been one of the most successful at introducing in-the-market competition for passenger services) the degree of competition from in-the-market passenger services is "marginal at best" (see box, below).<sup>47</sup>

One of the reasons this model may fail to deliver competition is the perpetuation of perverse incentives on the train path allocation body to be truly independent when allocating paths to new entrants, even in spite of recent EU Directives. For example, at present there is separation

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<sup>40</sup> Transport for Quality of Life, *Rebuilding Rail*, June 2012

<sup>41</sup> Nash, C., "[Passenger railway reform in the last 20 years – European experience reconsidered](#)", *Research in Transportation Economics* Volume 22, Issue 1, 2008, p63

<sup>42</sup> Mizutani et. Al, "[Comparing the costs of vertical separation, integration, and intermediate organisational structures in European and East Asian railways](#)", *Journal of Transport Economics and Policy*, 2014

<sup>43</sup> Ibid., p31

<sup>44</sup> Op cit., "[Structural reform in the rail industry](#)" p86

<sup>45</sup> Ibid., pp112-113

<sup>46</sup> Ibid., p113

<sup>47</sup> Ibid., p113

between infrastructure and operations in Italy, but both parts are owned by a single holding company. There have been complaints to the European Commission over refusal by the infrastructure manager to grant access to the track. Trenitalia still largely dominates the Italian railway and intra-modal competition is extremely limited.<sup>48</sup>

### Case Study: Germany

The state-owned, incumbent rail operator in Germany, Deutsche Bahn AG, is generally regarded as having retained its status as a vertically integrated company but since 1994 has taken the form of a holding company, with distinct sub-divisions at the upstream level.

Under the current model, DB Netz (the infrastructure manager) and the state-owned train operating companies such as DB Regio (non-commercial services), DB Schenker Rail (freight), and DB Bahn Fernverkehr (long-distance passenger services) are part of the DB Holding Company. There is open access for both passenger and freight services. Both DB and non-DB operators must negotiate track access with DB Netz and also acquire access to other infrastructure facilities operated by DB companies such as DB Station and Service and DB Energy.

Franchises are handled by thirty-three regional authorities. They often franchise their services in several different packages: service contracts have different contractual forms and different degrees of service specification. They also vary with respect to contract duration and network size, ranging from single lines up to whole regional network bundles, and between gross and net cost contracts. Transport agreements do not entail any exclusivity so that here in principle, open access is also possible.

The *Bundesnetzagentur* (the regulatory body for the utility sectors such as electricity, gas, telecommunications, and postal services) has been responsible for supervising the rail market since 2006, in particular in order to safeguard non-discriminatory access to rail infrastructure.

Because of the high track access charges and dominance of a vertically integrated company in Germany, one might expect that it would have low new entries, least market growth and potentially the least pressure on operating costs. However, there appears to be a high number of passenger operators in Germany, including a number of foreign companies.

As discussed in the Rail Liberalisation Index, “The organisation of the railway market with the infrastructure and operation divisions combined under the umbrella of the DB Group is not detrimental to the positive development of the competition conditions in the market”.

Even so, DB still dominates regional rail passenger services, with 88% of train kilometres.

Although currently Deutsche Bahn remains wholly owned by the Federal Republic, a controversial privatisation of (at least part of) the Group has been on the political agenda for several years.

*Sources:* Kirchner, C. (2005). Germany. [In Reforming Europe's railways. An assessment of progress](#), Brussels: CER, 80–93 and Nikitinas, V, and Dailydka, S. (2016) [The Models of Management of Railway Companies in the European Union: Holding, the German Experience](#), *Procedia Engineering* 134, 80-88

## 1.3 Vertical separation

As outlined in the European Commission's 2011 White Paper, competition to operate rail services is seen as an important way to improve services and lower fares:

End customers of rail transport – passengers, forwarders and contracting authorities – would benefit from this increase in competition through lower prices, higher quality and greater customer orientation. This would increase the attractiveness and

<sup>48</sup> See European Commission [outline](#) of the Italian railway

market share of rail, which is a declared goal of European and many national transport policies.<sup>49</sup>

However, there remains a danger of conflict of interest where the infrastructure manager is part of a vertically integrated structure, as they retain an incentive to restrict or deny access to competitors.<sup>50</sup> The incentive to discriminate against new entrants may be eliminated by fully institutionally and organisationally separating the infrastructure manager and the service provider. Thus, the principle advantage of vertical separation is that, at face value, it ensures equal terms of competition between different operators when no operator has more control over the infrastructure than any other.

The model in Great Britain's is one of complete vertical separation and privatisation of all train operators. Sweden is the other notable example of complete vertical separation, though it differs from Britain's in a number of areas, most notably that the state-owned operator still has a significant presence in the market (see box, below). Norway, Denmark, Spain, Portugal and the Netherlands also operate in a vertically separated framework.

Even though complete separation is perceived to be more conducive to competition, Van de Velde et. al (2012) found that "no single structure seems more favourable than the others in terms of promoting market entry",<sup>51</sup> adding that:

Complete vertical separation will not remove the incentive for the infrastructure manager to favour major customers over minor ones. It should be reiterated that we have found no systematic pattern whereby new entry, where permitted, is less likely with a holding company than complete separation, so it is not clear that further measures are needed.<sup>52</sup>

The other notable advantage of having complete vertical separation is that it provides financial transparency and enables specialisation, particularly in terms of private companies providing public-facing commercial services and leaving government to maintain its role in the financing and investment aspects of the railway.<sup>53</sup> It is argued that:

...transparency may in itself be a way of increasing competition, but it may also have other advantages in terms of helping regulators and state authorities to make efficient decisions, for instance regarding investment. In a franchising system it may attract bids from more companies than those who would be willing to take responsibility for both the infrastructure and train operations in (regional) vertically integrated franchises.<sup>54</sup>

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<sup>49</sup> European Commission, *White Paper: Roadmap to a Single European Transport Area*, COM(2011) 144 final, 2011, p9

<sup>50</sup> Op cit., "[Structural reform in the rail industry](#)", p129

<sup>51</sup> Op cit., *EVES-Rail - Economic effects of Vertical Separation in the Railway Sector*, p32

<sup>52</sup> Ibid., p34

<sup>53</sup> Op cit., "[Passenger railway reform in the last 20 years – European experience reconsidered](#)", p63

<sup>54</sup> Op cit., *EVES-Rail - Economic effects of Vertical Separation in the Railway Sector*, p32

From the point of view of technical efficiency,<sup>55</sup> vertical separation clearly generates a number of costs. Transaction costs, for example, in terms of negotiation and enforcement of contracts between the operators and the infrastructure manager, would be avoided by a vertically integrated railway.<sup>56</sup> While transaction costs are higher in separated systems, overall they are rather small, in the region of 2-3% of total railway costs.<sup>57</sup>

### Case Study: Sweden

In 1988, rail infrastructure was vertically and institutionally separated from train operations in Sweden under the Transport Policy Act of 1988. This came in response to the financial deterioration of Swedish State Railways (SJ) in the 1970s and 1980s. Through this reform, the state took full responsibility for track infrastructure investments and maintenance, by means of a new authority, Banverket, while SJ was restructured into a train operating company, paying fees to run on the tracks. The decision also included a decentralisation of responsibility for the unprofitable local and regional lines to the regional transport authorities.

In 1996, control of scheduling and access was shifted to Banverket from SJ, and open access for freight was imposed. SJ continued to operate all passenger services, with support for local and regional services negotiated with local authorities. By 1998, local authorities started to put more and more local services up for competitive franchises and, over the next few years, SJ lost many of the competitions because of its high costs and rigid management. Following an influx of new passenger train operators in 2000, SJ was suddenly considered to be in a disadvantageous situation compared with its competitors. To rectify this, but also ensure equal access to functions and services for all operators, SJ's organisational structure as a business administration (a state-owned public utility organisation but with an included objective to make profits) was replaced in 2001 by several state-owned companies concentrating on specified railway businesses: The passenger division formed one company (SJ Ltd), the freight division another (Green Cargo), real estate became Jernhusen, vehicle maintenance turned into EuroMaint and Swemaint, etc.

The reforms in the following years focussed on modernising laws and regulations to achieve a regulatory framework in line with European Union directives. As a consequence of the European Commission's first railway package, new legal measures were introduced in Sweden, regulating the access to the state's railway infrastructure and the right to run railway services. A new regulatory body, the Swedish Rail Agency, was also established.

In 2007 SJ Ltd lost its monopoly on night trains and charter trains. These changes constituted a first step towards a new order of competition "on the track", based on market principles without subsidies. In the spring of 2009 further legislation set out the step-by-step dismantling of the remaining SJ monopoly on long-distance passenger services. The national passenger market was opened for competition in October 2010, taking full effect from the implementation of the new timetable in December 2011. Finally, by means of a new law on public transport in January 2012, affecting also local and regional bus and railway services, open access is possible anywhere, although a large part of the market is still characterised by competitive tendering.

*Source:* Alexandersson, G., & Rigas, K. (2013) [Rail Liberalization in Sweden](#), Policy Development in a European Context. *Research in Transportation Business & Management*, 6, 88-98

<sup>55</sup> Technical efficiency is the effectiveness with which a given set of inputs is used to produce an output. A firm is said to be technically efficient if it is producing the maximum output from the minimum quantity of inputs, such as labour, capital and technology

<sup>56</sup> OECD, [Recent developments in rail transportation services](#), DAF/COMP(2013)24, 2013, p28

<sup>57</sup> Merkert, R, A. Smith and C.A. Nash, "[The measurement of transaction costs – Evidence from European Railways](#)", *Journal of Transport Economics and Policy*, Vol. 46, No. 3, September 2012, pp349-365

It should be noted that cost increases depend on the circumstances of the country concerned and the way in which the system is managed.<sup>58</sup> Interestingly, a number of studies found that for more densely used railways, of which Great Britain can be categorised, vertical separation costs are higher than less for densely used railways.<sup>59</sup> Because of this Van de Velde (2012) concluded that:

... where traffic is dense, there is a particularly strong need to ensure close coordination. This may suggest complete vertical integration, a holding company structure, with an active holding company, or hybrid arrangements (such as joint ventures) between the infrastructure manager and the leading train operator.<sup>60</sup>

In addition to transaction costs, costs can be driven up by a misalignment of incentives between the various independent actors under vertical separation.<sup>61</sup> This is because each actor is submitted to a set of incentives given by the market and/or by the regulatory context. Each of these actors is likely to optimise its own economic position under these constraints, rather than those of the system as a whole.<sup>62</sup> In practical terms:

... infrastructure managers may have too little incentive to help train operating companies to increase revenue, by timely implementation of improvements in capacity and quality, and by failing to optimise timetables, slot allocation and day to day operations. (for instance in terms of planning and undertaking track maintenance and renewals and recovery from delays).<sup>63</sup>

The quantitative evidence available to assess the concrete cost consequences of misalignment is limited.<sup>64</sup> The 2011 McNulty Rail Value for Money Study concluded that the total costs of the British rail system could be reduced by 30% by 2018/19,<sup>65</sup> and that the principal barriers to efficiency and cost reduction were “fragmentation of structures and interfaces” and “ineffective and misaligned incentives”.<sup>66</sup> A supporting consultancy report concluded that “while transaction costs are significant in absolute cash terms, they do not in themselves appear to contribute as much to net cost and general industry outcomes as do incentive [costs]”.<sup>67</sup>

The misalignment of incentives can be “reconstructed” using other mechanisms besides the basic track access charging system, which “itself proves to be insufficient to solve all misalignment issues created

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<sup>58</sup> Nash, C, and Matthews, B. for TS and CER, [European transport policy: progress and prospects](#), 2009

<sup>59</sup> Op cit., [EVES-Rail - Economic effects of Vertical Separation in the Railway Sector](#), p6

<sup>60</sup> Ibid.

<sup>61</sup> Op cit., [Recent developments in rail transportation services](#), p28

<sup>62</sup> Nash et. Al, “[Structural reforms in the railways: incentive misalignment and cost implications](#)”, *Research in Transportation Economics*, 48, 2014, pp16-23

<sup>63</sup> Op cit., [EVES-Rail - Economic effects of Vertical Separation in the Railway Sector](#), p33

<sup>64</sup> Ibid., p27

<sup>65</sup> DfT/ORR, [Realising the Potential of GB Rail: Final Independent Report of the Rail Value for Money Study](#), May 2011, p45

<sup>66</sup> Ibid, p5

<sup>67</sup> Arup & Oxera for the VfM Review Team, [Review of rail cross-industry interfaces, incentives, and structures](#), September 2010, ppi-ii

by separation".<sup>68</sup> Additional realignment mechanisms have been developed in various countries and these tend to move towards hybrid, cooperative arrangements (e.g. long-term contracts, strategic partnerships and joint ventures), which set out targets and partially apply bonus/penalties schemes to incentivise the actors over and across the train infrastructure divide (see box below).

### Great Britain: Aligning the incentives

From the beginnings of its rail reform programme in the early 1990s, Great Britain paid more attention to the alignment of incentives than most other countries. In particular it developed a sophisticated system of track access charges differentiated to reflect the different wear and tear imposed by several hundred different types of vehicles. Later a 'congestion charge' was added to reflect the greater potential for performance degradation (delays etc.) when lines are operated close to capacity. There is also a performance regime in which operators are compensated for delays attributed to the infrastructure manager or other operators, and in turn pay for the delays they cause. These charges are reviewed and can be amended as part of the Office of Rail and Road's [Periodic Review](#) process, which are then transposed onto Network Rail's Control Periods.

The [Adam Smith Institute](#) described these charges as "a bewildering series of money transfers [going] round the system taking in TOCs, Network Rail, the ROSCOs, the Department for Transport (DfT), ORR and the Treasury inter alia". [McNulty](#) considered that there were major failings in the correct alignment of incentives. In particular, he concluded that operators had no incentive to assist the infrastructure manager in reducing total costs, since only franchisees pay more for marginal costs and they were protected from changes in track access charges under the terms of their franchise agreements. He also stated that the infrastructure manager (Network Rail) had inadequate incentives to assist operators to improve performance and revenue.

McNulty concluded that "...industry relationships are based on contracts rather than partnerships [which] can lead to inflexibility and confrontation [and] slow and ineffective decision-making." The Adam Smith Institute commented that the highly complex series of legal contracts has "engrained bureaucracy within the railway industry". The Transport Select Committee also concluded in its 2017 [Rail Franchising](#) report that "the relationship between Network Rail and operators is not as coordinated as it should be", and that a major reason for this is the misalignment between "the control periods and franchising schedules", which determine the timing of aforementioned incentive schemes.

According to [Van de Velde et. al \(2012\)](#), "the most effective alliance in terms of alignment of incentives is the formation of a joint venture". McNulty looked at case studies which estimated that a joint venture might achieve substantial cost savings of up to 20%. Alliancing has been tested in Britain but to date the results have been mixed, with the Transport Select Committee in the same report commenting that "while [alliancing has been] a step toward greater alignment between the operator and Network Rail, [it] has not achieved the desired benefits that were initially envisaged for this programme".

However, it is acknowledged that as "near-impossible" to design a track access charging system that simultaneously provides for non-discrimination, appropriate incentives for efficient development of the network and appropriate incentives for its use.<sup>69</sup> Indeed, Van de Velde et. al (2012) concluded that "whether the resulting set of mechanisms will lead to a similar level of performance to what in principle can be achieved in [integrated] regimes (e.g. Japan) is doubtful".<sup>70</sup>

There are other planning and coordination conflicts between operators and the infrastructure manager that result from vertical separation, particularly in terms of managing network changes, determining access

<sup>68</sup> Op cit., [EVES-Rail - Economic effects of Vertical Separation in the Railway Sector](#), p27

<sup>69</sup> Ibid., p12

<sup>70</sup> Ibid., p29

and timetables, as well as managing delays and disruption. These issues can become even more problematic when traffic is dense. For example:

...on network changes, it is necessary to reach an agreement regarding what investments are necessary, the financing of investment which benefits more than one stakeholder, and how it is to be undertaken. Similarly, regarding access and timetabling, the key problem is to achieve the best possible compromise between the requirements of the different operators, whilst levying charges which provide appropriate incentives and raise the necessary amount of revenue. Another area which might be added is safety, where the allocation of responsibilities must be clear and a balance is needed between costs and effectiveness. It may be that an independent infrastructure manager has an incentive to impose excessive safety requirements, where the costs will be borne by third parties, such as in the introduction of new rolling stock.<sup>71</sup>

Despite the wide range of experience, the appropriate role of vertical separation in the overall reform of the rail industry is not yet clear.<sup>72</sup> There does not seem to be a “one-size-fits-all” solution in term of separation<sup>73</sup> and “there seems to be no evidence that vertical separation is unconditionally superior or inferior to other structures”.<sup>74</sup> The success of separation depends on the interaction with other reforms and the sequencing of the reforms. Ultimately the decision maker will be making the assessment that the benefits from competition outweigh the costs involved with vertical separation.

### 1.4 Other factors at play

There remains a great deal of uncertainty about which structural reforms work best and under which circumstances. There are quantitative limitations in defining and measuring the “success” of any structural rail reform,<sup>75</sup> and the relative success or failure of reform is influenced, not only by the reforms themselves, but by a number of other different economic, industry, social and political factors.

For example, there might be two similar countries in terms of population, rail passenger and freight split, with near identical structural frameworks. They may both undergo the same structural reform process, implemented over the same period of time. Yet, there may be

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<sup>71</sup> Op cit., “[Passenger railway reform in the last 20 years – European experience reconsidered](#)”, p63

<sup>72</sup> Moreno, J, and Huertas, V., “[Do reforms improve efficiency in European railways sector? An empirical analysis with non-parametric approaches](#)”, *International Journal of Recent Engineering Research and Development*, Volume No. 02 – Issue No. 02, 2014, pp37-50

<sup>73</sup> Op cit., “[Structural reforms in the railways: incentive misalignment and cost implications](#)”, pp16-23

<sup>74</sup> Op cit., [EVES-Rail - Economic effects of Vertical Separation in the Railway Sector](#), p4

<sup>75</sup> According to [Nash et. al \(2013\)](#), the existing evidence is unclear on the impact of rail reform. Perhaps this is not surprising. Econometric studies suffer from the small sample of countries to deal with, the significant differences in the way in which reform has been carried out among them, and that few countries have seen significant levels of competition, particularly in the passenger market. There are also serious problems in ensuring data comparability

differences between these two countries in terms economic growth,<sup>76</sup> the cost and quality of the infrastructure and in the case of a vertically separated railway, the ongoing relationship between operators and the infrastructure manager. These and other differences can translate into very different rail performance metrics despite undergoing broadly the same structural reform.

An example of this is Japan, where despite the perceived success of its rail reforms, rail passenger growth has remained relatively static. This has in a large part been influenced by wider economic factors such as stagnant population growth and an embedded social preference for car use. Similarly Britain's reforms, which are arguably viewed less favourably than the Japanese reforms, have seen significant growth in passenger numbers, though it is generally recognised that the major causes for this growth are exogenous from the reform process.<sup>77</sup>

Support by government for investment in infrastructure is also important, given how poor infrastructure affects service quality, reliability and, ultimately, the competitiveness of the whole rail sector.<sup>78</sup> This problem of identifying the full effect of reforms on rail sector performance is explained by Alexandersson and Rigas (2013) with reference to the reforms in Sweden:

Although the Swedish case, serving as an example of a liberalised market, shows some impressive gains in terms of passenger development (including market share) and to a lesser extent also for freight, it is very difficult to link these improvements primarily to vertical separation and/or market opening. It is likely that there is a contribution from these policies that should not be neglected, but one must also consider the simultaneous increase in investments and the ambitions of regional authorities to expand their networks (adding to the supply of relatively cheap transport).<sup>79</sup>

With respect to measuring whether structural rail reform has led to an increase in rail's share of the transport mode split, Holvad (2017) adds:

Overall, it is difficult to demonstrate a direct linkage between rail regulatory reform initiatives and the rail modal share in the passenger transport market. As such, the competitiveness of rail vis-a-vis other modes as reflected in its modal share would be determined by a range of influencing factors some of which are within the domain of public policy, while others are linked to railway industry practices as well as preferences and constraints faced by individuals. This implies also that there would be limits to how much can be expected to be delivered from railway

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<sup>76</sup> [Wardman \(2006\)](#) found economic growth to be particularly important, as well as rising road congestion

<sup>77</sup> Smith, A. and Nash, C. (2014), [Rail Efficiency: Cost Research and its Implications for Policy](#), International Transport Forum Discussion Papers, 2014/22, p15

<sup>78</sup> Drew, J. and Nash, C.A., [Vertical separation of railway infrastructure - does it always make sense?](#), Institute for Transport Studies, University of Leeds, Working Paper 594, 2011, p2

<sup>79</sup> Alexandersson, G., & Rigas, K., "[Rail liberalisation in Sweden: Policy development in a European context](#)", *Research in Transportation Business & Management*, Vol. 6, 2013, pp88-98

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regulatory reform measures only as other connected measures would need to be place as well.<sup>80</sup>

There are other measurable outputs of rail sector performance, including operating efficiencies, operating and capital expenditure, rail fares, day-to-day service quality and punctuality and dependence on government subsidies, just to name a few. There is a risk that such benchmarks are viewed as authoritative metrics of the relative success or failure of the structural reform. Any reforms have to be viewed in the full context of the various economic, structural, political, and social factors in a particular country.

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<sup>80</sup> Holvad, T. Università Degli Studi Di Milano, Dipartimento Di Economia, [Market structure and state involvement: Passenger railways in Europe](#), Working Paper No.4, January 2017, p24

## 2. Structural reform in GB

Until 1994, the rail industry in Great Britain was organised in the form of a single, publicly owned and integrated company, British Rail (BR), which managed the infrastructure and provided passenger and freight services throughout the country.<sup>81</sup>

The fundamental objective of advocates of privatisation was to free the nationalised industries from bureaucracy and political intervention and to replace these forces with the disciplines of the market, in the expectation that this would lead to greater efficiency, lower unit costs and a better allocation of resources. The corollary of this, usually welcomed by management, was that enterprises were freed from constraints on investment and on funding imposed as part of public expenditure controls.

Opponents of privatisation argued that it was primarily a convenient way of abandoning the traditional social duties of the public enterprise, and of renegotiating, to the disadvantage of employees, their terms of employment. Further, the goals of reduced bureaucracy, greater efficiency, lower unit costs and better allocation of resources would not necessarily result from privatisation and could be achieved by other means.<sup>82</sup>

After much debate about options, including the possibility of complete open access on the rail network, the Major Government opted for the structure of a regulated monopoly infrastructure provider with competitive operators using it. As a consequence BR was broken up into around a hundred different companies and privatised. Many consider this to be most radical reform of any national railway<sup>83</sup> and "on a scale never contemplated anywhere else in the world before or since".<sup>84</sup>

### 2.1 What did the rail market look like before the 1990s?

British Rail (BR) was a public corporation established under section 1 of the [Transport Act 1962](#) as a successor to the rail and shipping activities of the British Transport Commission.<sup>85</sup> The British Rail Board operated passenger and freight services within Great Britain and was almost

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<sup>81</sup> Although it should be noted that British Rail had its borders too: between regions, sectors and divisions; for full discussion of British Rail's structure and progress up to privatisation see: Gourvish, T. (2002) [British Rail 1974-1997 From Integration to Privatisation](#); see also HC Library briefing paper [SN1157](#)

<sup>82</sup> Transport Committee, *Financing of Rail Services* (third report of session 1986-87), HC 383, 13 May 1987, para 232

<sup>83</sup> e.g., op cit., "[Comparing the costs of vertical separation, integration, and intermediate organisational structures in European and East Asian railways](#)", p10

<sup>84</sup> Smith, A., [Liberalisation of passenger services, Case Study – Britain](#), Centre on Regulation in Europe, 6 December 2016, p3

<sup>85</sup> the BTC was established under the *Transport Act 1947* to provide "an efficient, adequate, economical and properly integrated system of public inland transport and port facilities within Great Britain for passengers and goods", excluding transport by air and came into operation on 1 January 1948 when the various interests in shipping, railways, hotels and road transport that were nationalised

entirely vertically integrated, that is to say it owned its own trains, infrastructure and carried out almost all track and train maintenance itself. Under state control, the railways were expected to run economically but also to cater for not always clearly defined social needs. In compliance with European rules it also operated passenger services on a non-commercial basis where so directed by the Secretary of State.<sup>86</sup> The Secretary of State paid BR a grant to cover the cost of providing any loss-making services.

The Secretary of State for Transport exercised a number of controls over the BR Board, such as appointment of the Chairman and Board members; setting the external financing limit (EFL) and the public service obligation (PSO) grant; determining the Board's investment allocation and approval of major investment projects; setting borrowing limits; having the final say on station closures and service cancellations; setting financial targets; and agreeing the business plans. He also approved changes in the organisation of the Board; extensions of BR's fields of activities; and the disposal of businesses and assets. Many of the powers were procedural, or related to financial propriety. The Secretary of State also had various safety and regulatory powers under railways legislation.<sup>87</sup>

During the 1980s BR was encouraged to develop greater commercial awareness. It did this by reorganising its business and objectives, privatising its 'non-core' activities and encouraging private sector involvement.<sup>88</sup> These initiatives contributed to BR's major organisational transformation in the decade preceding its privatisation. The Conservative Government's determination to reduce the level of subsidy flowing to the public sector railway stimulated a drive within BR for substantial efficiency improvements. Central to these reforms was the partial replacement of the existing structure based on regions by one formed around distinct rail business sectors, each with managers meeting objectives in terms of marketing, cost allocation and investment decisions. A further reform came in 1991 with the launch of 'Organising for Quality'. Completed by April 1992, this initiative finally abolished the old regions (which had continued to physically run the trains) and defined separate profit centres within each of the business sectors.

In some respects the substantial reorganisation and the accompanying efficiency improvements undertaken by BR in its final decade generated the conditions that made privatisation a more viable policy. The new business sectors formed at least part of the basis for the privatised railway and showed that the system could be operated as a series of relatively independent components, rather than as a monolithic

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<sup>86</sup> called 'public service obligations' (PSOs), made under State Aid rules; more information on EU rail policy can be found in HC Library briefing paper [SN184](#)

<sup>87</sup> powers derived mainly from the *Transport Act 1962*, *Transport Act 1968*, *Railways Act 1974*, *Transport Act 1980* and *Transport Act 1981*

<sup>88</sup> for further information see HC Library briefing paper [SN1157](#)

structure. The reorganisation also led to a marked reduction in the PSO payments paid direct to BR in support of loss-making services.<sup>89</sup>

As a consequence of all these changes, by the late 1980s BR could be said to be doing well, but after the good times of 1980s, BR's finances collapsed in the early 1990s largely because of increased expenditure on safety following the 1988 Clapham rail crash, the costs of improving lines to the Channel Tunnel and perhaps above all because of the recession, which saw usage fall by ten per cent.<sup>90</sup>

## 2.2 Privatisation

Privatisation of the railways had been discussed intermittently since the 1960s and there was apparently an idea to float the Southern Region of BR after the 1979 election, but this never went anywhere. Mrs Thatcher finally agreed to the policy in late 1990, shortly before she left office. John Major was initially more enthusiastic, though the driving force behind the proposal appears to have been the Treasury. There was later confusion between various models of privatisation proposed by the Treasury and alternative suggestions or 'hints' from the then Transport Secretary, Malcolm Rifkind and the Prime Minister.<sup>91</sup>

The 1992 Queen's Speech promised that "legislation will be introduced to enable the private sector to operate rail services".<sup>92</sup> On 7 May a 'paving' Bill was introduced to confer on the BR Board "powers to participate in the implementation of proposals for the transfer of their commercial activities to the private sector and proposals for the establishment of new arrangements with respect to their other functions".<sup>93</sup>

In July 1992 the Government published its White Paper outlining proposals for privatising British Rail (BR).<sup>94</sup> The core of the Government's proposals was the greater involvement of the private sector in the running of the railways through the sale of some of the BR businesses and the progressive contracting out of the management of passenger services. The principal organisational means of achieving these objectives was the separation of responsibilities for track and operations. The *Railways Bill 1992-93* was published on 22 January 1993 and had its Second Reading on 2 February.<sup>95</sup> The Bill was essentially an enabling measure, leaving a large degree of discretion to the Secretary of State, the regulator, and Franchising Director. Further,

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<sup>89</sup> Transport Committee, *Railway finances* (fourth report of session 1994-95), HC 206, 5 July 1995, para 9

<sup>90</sup> *ibid.*, paras 16-20

<sup>91</sup> Wolmar, Christian, *Broken Rails: How Privatisation wrecked Britain's railways* (2002), chapter 4

<sup>92</sup> [HC Deb 6 May 1992, c51](#)

<sup>93</sup> the [British Coal and British Rail \(Transfer Proposals\) Act 1993](#) received Royal Assent on 18 January 1993; the Secretary of State explained the purpose of the Bill at Second Reading, see: [HC Deb 18 May 1992, cc22-35](#)

<sup>94</sup> DoT, [New opportunities for the railways: the privatisation of British Rail](#), Cm 2012, July 1992; this was accompanied by a statement to the House on 14 July, see: [HC Deb 14 July 1992, cc971-72](#); there were further debates on the White Paper in October 1992 ([HC Deb 29 October 1992, cc1160-1222](#)) and on an Opposition motion opposing privatisation in January 1993 ([HC Deb 12 January 1993, cc771-869](#))

<sup>95</sup> [HC Deb 2 February 1993, cc156-255](#)

there was no mention anywhere in the Bill of Railtrack – an indication of the sweeping nature of the powers contained in Part II, which enabled the Secretary of State to restructure BR in any way he thought fit.

The proposals excited much comment. The Transport Committee published a report on the subject in April 1993 which concluded:

It is clear that in terms of previous international railways experience, the form of privatisation adopted by the UK Government is both novel and experimental (in the sense of being untested). It is true that some elements of the Government's proposals have been put into practice or contemplated in various parts of the world. Yet in no country with a rail system of comparable size and density of use is there an example, either in operation or even under consideration, of a complete scheme such as that contained in the Railways Bill. This does not of itself mean that it cannot succeed. To take that argument to its logical conclusion would mean that no innovation ever took place. What it does mean, however, is that because of the lack of previous experience to draw upon, the risk that something could go badly wrong is that much higher. To put it another way, the system of railway operation proposed by the Government probably can work, but, in the words of one witness, it may need to be *made* to work.

The onus lies firmly on the Government to demonstrate that its plans will provide a better service to the travelling public. If all the Government's assumptions are correct about such matter as:

1. the prospects for investment;
2. the practicality of the relationship between Railtrack and operating companies;
3. the response of the private sector to the new opportunities on offer; and
4. the feasibility of combining open access with franchising

then there may be the *potential* for an improved railway system. Whether the Government is right in these assumptions is a matter of political judgement. The final verdict will rest with rail users.<sup>96</sup>

### ***Railways Act 1993***

The [\*Railways Act 1993\*](#) received Royal Assent on 5 November 1993. Part I set out the respective powers and duties of the Secretary of State, the regulator and the Franchising Director. It also specified line closure procedures, conferred upon the High Court powers to issue Railway Administration Orders in the event of default by independent railway operators, and established machinery for consumer representation. Part II related to the Secretary of State's powers to direct BR to reorganise itself and to form companies for various purposes, including franchising and disposal. Part III of the Act contained miscellaneous provisions relating to safety, railway heritage, the British Transport Police, pensions, freight, financial assistance to BR staff in the preparation of management buy-outs or franchise bids, and other matters. Many of the principal changes were brought into effect on 1 April 1994.

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<sup>96</sup>Transport Committee, *The Future of the Railways in the Light of the Government's White Paper Proposals* (second report of session 1992-93), HC 246, April 1993, paras 523-524

The legislation radically changed the structure of the railway industry by separating the responsibility for infrastructure and passenger service operations. BR was divided into a body known as Railtrack on the one hand, and a residual BR operating company to run all the other services until they were sold or franchised. The [Office of Rail and Road \(ORR\)](#) was set up to oversee the charges to be levied by Railtrack for the use of the infrastructure.<sup>97</sup>

## 2.3 What happened after privatisation?

There were a number of problems with the railways in the five years or so after privatisation – some to do with the actual privatisation itself and others due to secondary factors that were not directly linked to the structure of the industry after 1993. Some of these might have been anticipated in the run up to and during privatisation and dealt with but for one reason or another were not.

For example, it is debatable as to whether there was sufficient discussion about the structure of the privatisation – Railtrack was not mentioned in the 1993 Act and Ministers were not clear what form the new infrastructure company would take; the requirement for competition and open access was never seriously tackled; and the question of continued public subsidy was largely overlooked. The desire to complete the privatisation before the 1997 General Election, combined with Labour being so far ahead in the polls and committed to renationalisation, led to confusion and issues with methods of sale of the various parts of the industry.<sup>98</sup>

Privatisation itself involved breaking up BR into around 100 component companies, introducing complexity, and the powers available to the regulator were often unwieldy. The relations between the component parts of the industry were also perhaps over legalistic to the point of engendering confrontation and antagonism rather than co-ordination and co-operation.

The privatised railway itself lacked a long term planning body with the sort of strategic duties BR had and Railtrack arguably lacked knowledge of its asset base, contributing to later problems (e.g. dealing with the aftermath of the Hatfield crash). At the beginning there was a lack of

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<sup>97</sup> this is the rail regulator, it changed its name on 1 April 2015 to include reference to its new role regarding Highways England; for further information on the history of ORR see HC Library briefing paper [SN2071](#)

<sup>98</sup> Labour's May 1996 policy paper *Consensus for Change: Labour's Transport Policy for the 21<sup>st</sup> Century*, said: "Labour is committed to a publicly owned and publicly accountable railway [...] An incoming Labour government will use all the levers at its disposal to halt the damage of privatisation, reintegrate the network and generate higher levels of investment. On coming to office Labour will set in place a structured programme to return the railways to an integrated whole. We will build on what is left of British Rail to create a renewed publicly owned company which will be charged with reintegrating the network, protecting the public interest and organising public private partnerships to increase investment [...] We will end the franchising process [and] give the powers of the franchising director to British Rail, who will supervise the franchises which have already been let and resume control of these lines when the contracts expire". This was significantly watered down in the [Labour Manifesto for 1997](#) and the promise to renationalise was removed

clarity about the roles of Franchising Director and Rail Regulator, leading to confusion and there were shortcomings in the range of 'network benefits (e.g. ticket sales, National Rail Enquiries and passenger compensation). More fundamentally there was evidence of poor management particularly at Railtrack, which appeared to be inept at estimating the costs of large projects and managing its subcontractors while failing to reconcile its public interest objectives with the interest of its shareholders to maximise profits.<sup>99</sup>

### Railtrack

Railtrack was set up on 1 April 1994 under the 1993 Act to manage the rail infrastructure (track, stations, etc.). It was sold to the private sector in May 1996. Railtrack's main sources of revenue were the charges it levied on train operators for track access and the lease income it received for stations and depots. Until 2001 Railtrack did not receive direct revenue subsidy from the Government although it was indirectly dependent on the significant amount of public sector support received by the train and freight operating companies. Railtrack plc was put into administration on 7 October 2001 and came out of it on 1 October 2002. Network Rail took over many of its responsibilities on 3 October.<sup>100</sup>

Railtrack's difficulties came about for a variety of reasons. Those offered at the time included: lack of awareness about poor asset condition; privatisation was overly ambitious and financially risky; the complex contractual base of the privatisation; the extent and nature of Government and regulatory intervention; and poor management.<sup>101</sup>

All of this meant that by October 2001 Railtrack was insolvent, even if it was not bankrupt, and plans for some sort of restructure of Railtrack had been around for some months. The four most widely talked about at the time were:

- renationalisation (consistently ruled out by Ministers as too expensive);<sup>102</sup>
- restructuring, whereby the Government would take an equity stake in the company, suspend the regulator and fund the company directly for a few years until it was in a better position (this was the favoured option of Railtrack's directors, referred to as 'Project Rainbow');
- converting the company into a not-for-profit entity of some sort ('Project Ariel'); or
- breaking up Railtrack into regional businesses.

In the event the Government chose a variant of the third option; a decision that was not without controversy, largely to do with the way in which it chose to do it.<sup>103</sup>

<sup>99</sup> [The Government's Response to the Environment, Transport and Regional Affairs Committee's Report on the Proposed Strategic Rail Authority and Railway Regulation](#), Cm 4024, July 1998

<sup>100</sup> for more information on Railtrack and its administration see HC Library briefing papers [SN1224](#) and [SN1076](#)

<sup>101</sup> taken from contemporary comment, articles and reports, e.g. Christian Wolmar, *Broken Rails: how privatisation wrecked Britain's railways*, 2001; Lord Cullen/HSC, [The Ladbroke Grove rail inquiry: Part 2 report](#), September 2001; "Cabinet simply watched as 'poll tax on wheels' went off the rails", *The Times*, 8 October 2001; "Disastrous round trip was marked by failure to maintain lines", *The Times*, 8 October 2001; "Watchdog's severe targets skewed company's judgement", *The Times*, 8 October 2001; and "Signal failure", *The Sunday Times*, 14 October 2001

<sup>102</sup> because they would have had to buy the company shares at the full market value

<sup>103</sup> for the purposes of understanding the administration, please note that Railtrack Group plc was the company in which shareholders had shares; its main operating subsidiary was Railtrack plc, which was responsible for the management of the national rail infrastructure and it was this company that was placed in administration

That said, the railways in the immediate period after privatisation were not all bad. Until the Hatfield crash in October 2000, there was strong growth in both passenger and freight traffic; punctuality and reliability were slightly better than in the final years of BR and safety standards were gradually improving. More trains were running (around 1,700 more each day than before privatisation); 30 per cent more passengers were being carried in 2000/01 compared with 1994/95; the amount of freight lifted had increased 40 per cent in the same period; and both punctuality and reliability improved, although performance had declined since the high point of 1996/97.<sup>104</sup> Railtrack's initial share price of 380 pence rose to 1,700 pence two years after privatisation, but by 2001 the position was very different and on 1 October 2001 the share price was 265 pence.

From 1997/98 to 1999/2000 performance was roughly stable, but it experienced a sharp decline following the Hatfield accident in 2000.<sup>105</sup>

### Fragmentation and industry costs

A number of stakeholders have argued that the key flaw in the privatisation of the railways was the fragmentation of the previously integrated railway ([McCartney, S, and Stittle, J, 2017](#)). Some have argued that a degree of fragmentation is not necessarily bad but the extent and speed of fragmentation in Britain was excessive and was something altogether new in the history of utility privatisation ([Bartle, 2004](#)).

It is also argued that fragmentation in Britain led to a high interface costs due to a more complex supply chain in which each actor requires a profit. For example, rolling stock is supplied by an independent manufacturer to a rolling stock operating company, which then leases it to a train operator. Some [academics](#) have suggested that each interface costs 5% of payments to the industry's suppliers at each level in the supply chain. There are also 'cash leakages' as interest payments and dividends were extracted from industry. It was estimated that between 1995/95 and 2002/03, these leakages amounted to £5.45bn, just over half the £10.7bn subsidy paid to TOCs in that period (McCartney, S, and Stittle, J, 2017).

[Smith et al. \(2009\)](#) showed that the total of infrastructure costs and passenger train operating costs per train kilometre rose by 34% in Britain over the period 1996/7 to 2005/6, suggesting that the reforms in Britain failed to control costs. [Taylor and Sloman \(2012\)](#) separately estimated "fragmentation costs" at £581 million in 2009, made up of interface costs between the TOCs and NR (£290m), costs of NR outsourcing (£200m) and operating margins of TOC and ROSCO sub-contractors (£91m).

McCartney and Stittle (2017) concluded that "...costs and subsidy have both increased. Privatisation has inflated costs: more exactly, given the volume of passenger traffic, the privatised industry has incurred higher costs than would have been incurred by British Rail". They also estimated that the additional aggregate costs of privatisation amounted to more than £50bn (at 2013/14 prices) between 1997/98 and 2013/14.

The IPPR think tank wrote in 2002 that "privatisation arguably introduced some useful innovations, notably competition in the delivery of passenger and freight services, performance incentives linked to the passenger's charter, transparent regulation, security of funding and access to private finance for investment".<sup>106</sup>

<sup>104</sup> Railway Forum fact sheet, *Britain's growing railways* (factsheet no. 1), 30 January 2001; and DfT, [Rail usage, infrastructure and performance \(RAI0101\)](#), 11 December 2014

<sup>105</sup> DfT, [Rail usage, infrastructure and performance \(RAI0105\)](#), 11 December 2014

<sup>106</sup> IPPR, *Getting back on track*, June 2002, executive summary

Following privatisation there was a great deal of criticism of the performance and reliability of the train companies, of Railtrack and the amount it was investing in the infrastructure and in the safety regime. Labour was particularly concerned about whether the Regulator had sufficient powers to deal with the private sector companies who ran the railways and about the supervision of public funds. With that in mind, its 1998 transport White Paper stated that the rail industry needed an element of stability and certainty if it was to plan its activities effectively.<sup>107</sup>

Particularly, the Government was concerned that there was “no focus within the privatised industry for long term strategic planning”; that the Franchising Director's remit was “too narrowly focused on the passenger railway”; that too many key policy decisions on the future of the rail industry lay in the hands of a statutorily independent regulator; that the sanctions available to the regulatory authorities were ‘unwieldy’; and that investment was not sufficiently prioritised.<sup>108</sup> It therefore proposed setting up a Strategic Rail Authority (SRA) to address these problems, asserting that this would provide the rail industry with the strategic leadership lacking since privatisation and the fragmentation of the sector. It would ensure the railways were run in the public interest, would promote their use and would ensure they were properly integrated with other forms of transport.

The SRA would tell the TOCs what services and network benefits the Government wanted to buy. It would ensure that the railway was properly integrated with other forms of transport and that the railway system was run as a network, not merely a collection of different businesses, particularly when franchises were re-let or re-negotiated. It would also ensure that the plans of freight operators were taken into account in the planning of the network as a whole.

Part IV of the [Transport Act 2000](#) gave statutory backing to the SRA from 1 February 2001. It transferred the functions, rights and liabilities of the Franchising Director and the residual functions, rights and liabilities of the British Railways Board (including responsibility for the British Transport Police) to the SRA. It set out its objectives and functions and established its structure and procedures and the terms and conditions of its members. The legislation also transferred the Regulator's responsibilities for consumer protection to the SRA and the responsibility for railway closures to the Secretary of State.

The SRA was set up to provide leadership for the rail industry but it lacked the power to bring together the various elements of the industry. It did have some successes. For example, it helped to get a grip on major projects which were running out of control, such as the [West Coast Main Line route modernisation project](#); it developed and

<sup>107</sup> DETR, [A new deal for transport: better for everyone](#), Cm 3950, July 1998, para 4.22

<sup>108</sup> [The government's response to the environment, transport and regional affairs committee's report on the proposed strategic rail authority and rail regulation](#), Cm 4024, July 1998, paras 6-11; responding to: ETRA Committee, [The proposed strategic rail authority and rail regulation](#) (third report of session 1997-98), HC 286, 18 March 1998

implemented a strategy to upgrade the electricity supply for rail services south of the Thames; it began the process of reforming the franchising regime; and it promoted better use of the network through its [Route Utilisation Strategies \(RUS\)](#). The SRA also developed a stronger regional focus, working to promote [community rail partnerships](#) and to promote joint working between the different parts of the industry and to drive up performance.<sup>109</sup>

The problems in the rail industry, however, turned out to be greater than realised in 2000 – there was the aftermath of the Hatfield accident; increasing infrastructure costs; Railtrack’s entry into administration; and the subsequent transfer of its responsibilities to Network Rail. Consequently, the Regulator played a more pivotal role during these years and the SRA found itself in an increasingly difficult position. A leadership model based on influence and persuasion was not strong enough.

As a result, the 2004 rail White Paper proposed that the SRA’s strategic and financial responsibilities would pass to the Department for Transport, as would its responsibility for awarding the passenger franchises. The Secretary of State would take responsibility for setting the national-level strategic outputs for the railway industry, in terms of capacity and performance. Operational matters would remain the clear responsibility of the industry. The SRA’s role in monitoring the performance of the train companies and drawing up timetables would be taken over by Network Rail.<sup>110</sup> Section 1 and Schedule 1 of the [Railways Act 2005](#) abolished the SRA and transferred its powers to the relevant bodies. This took place on 8 June 2005.<sup>111</sup>

In July 2004 the Regulator was replaced with an Office of Rail Regulation (ORR) and in its 2004 rail White Paper the Labour Government announced its intention to transfer safety responsibility to the ORR. This was legislated for in the 2005 Act. The ORR became both the economic and safety regulator for the rail industry on 1 April 2006 when it took over the safety regulation responsibilities of the HSE. These include the power to authorise a person to investigate and make a special report on a major incident.

## 2.4 McNulty Rail Value for Money Study, 2011

The Labour government established a review group in 2009, chaired by Sir Roy McNulty, to report on rail’s costs in Britain and identify options for improving value-for-money. In preparing the final report, the McNulty Review commissioned L.E.K Consulting to produce the Alternative railway structures study,<sup>112</sup> which identified four possible structural options for improving value for money in the rail industry:

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<sup>109</sup> SRA press notice, “[Britain’s railway ‘rehabilitated’](#)”, 15 July 2004

<sup>110</sup> DfT, [The future of rail](#), Cm 6233, July 2004

<sup>111</sup> [Railways Act 2005 \(Commencement No. 1\) Order 2005 \(SI 2005/1444\)](#)

<sup>112</sup> It included Volumes [1](#), [2](#) and [3](#)

- **Base package:** Radical franchise reform, regional accounting separation of Network Rail (NR), and cost and revenue sharing;
- **Horizontal separation:** NR split into regional units, some or all of which could be sold to alternative providers;
- **Vertical integration:** Competitively tendered concessions for integrated train operators and infrastructure managers on a regional basis; and
- **Vertical alignment:** Some functions would be provided by some form of an alliance between the regional infrastructure manager (“Regional IM”) and the dominant train operator in that region.<sup>113</sup>

In making an assessment of these various options, L.E.K concluded that vertical integration was the structure that achieves the best alignment of incentives between infrastructure managers and train operators. However, it caveated this finding, asserting that this varies on a case by case basis and “there are many other parts of the network where vertical integration should not be implemented”.<sup>114</sup> It concluded that where part of the network was relatively self-contained,<sup>115</sup> had a dominant train operator and where there was limited prospect for “in the market” competition, “it is very likely that there would be incremental benefit in implementing vertical integration in these regions”.<sup>116</sup> L.E.K recommended “a phased roll-out whereby vertical integration is implemented in a single region to start with and the learnings from that region are used to inform the decision as to where else to implement vertical integration”.<sup>117</sup>

McNulty himself concluded that key objectives of privatisation, including subsidy reduction, had not materialised, and highlighted key structural barriers to efficiency. Despite accepting that privatisation had not brought the expected benefits, McNulty dismissed the case for major structural reform.<sup>118</sup>

## 2.5 Developments post-McNulty

The Coalition Government published a rail Command Paper in 2012. It set out the different reform options to integrate the railway, but did not commit to any deep levels of reintegration, commenting:

Government welcomes the direction of the study’s recommendation and considers greater alignment of incentives for efficiency between Network Rail and train operators to be the most pressing reform necessary to drive down costs for rail industry. Government is committed to exploring the full menu of options for promoting greater alignment, including options to

<sup>113</sup> L.E.K. Consulting, [Alternative Railway Structures: Final Report – Volume 1](#), 7 March 2011, p4

<sup>114</sup> Ibid., p21

<sup>115</sup> Five of NR’s existing nine operating routes are already relatively self-contained and have a single dominant TOC, e.g. Greater Anglia, South West Trains, Kent, Merseyrail and Scotland

<sup>116</sup> Op cit., [Alternative Railway Structures: Final Report – Volume 1](#), p11

<sup>117</sup> Ibid., p11

<sup>118</sup> Op cit., [Realising the Potential of GB Rail: Final Independent Report of the Rail Value for Money Study](#), pp283–286

place responsibility for train operations and infrastructure management in an area in the same hands.

We also believe that decentralisation of certain functions within Network Rail and the formation of alliances with train operators is essential if we are to make Network Rail more accountable to its train operator customers.<sup>119</sup>

Though it did acknowledge that it would explore the potential for vertical reintegration:

We agree that vertical integration could offer promising benefits in the longer term. So building on alliancing and concessions, and subject to EU legislation, we will explore how full integration on discrete parts of the network might potentially drive further efficiency benefits and investment, helping both track and train to align around service delivery. This is most likely to be an option on Network Rail routes such as Wessex and Anglia where the majority of passenger train services are run by a single train operator.<sup>120</sup>

The structure of the railway in Great Britain has remained broadly the same in the five years since the Command Paper was published, though franchises and Network Rail have experimented with alliancing, with mixed success. This was highlighted in the Transport Select Committee's February 17 report on rail franchising:

It is clear that the alliancing programme, while a step toward greater alignment between the operator and Network Rail, has not achieved the desired benefits that were initially envisaged for this programme. We conclude that the programme is ultimately limited by the misalignment between franchises and Network Rail routes that prevents the establishment of deeper commercial arrangements.<sup>121</sup>

Dr Andrew Smith of the Leeds Institute for Transport Studies also concluded that "there is limited evidence that alliances between monopoly operators and Network Rail on individual routes have yet brought about cost reductions".<sup>122</sup>

## Shaw review into Network Rail, 2015-16

Further discussion of structural reform was evident in the *Shaw Report* into the future shape and financing of Network Rail published in March 2016.<sup>123</sup> It made seven key recommendations, based in three areas: customers, devolution and growth. In terms of devolution, one of her two recommendations was to focus on the customer through deeper route devolution, supported by independent regulation. This has been on the rail industry agenda for a long time.<sup>124</sup> Those on the left and the

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<sup>119</sup> Department for Transport, *Reforming our Railways: Putting the Customer First*, March 2012, p.41

<sup>120</sup> Op cit., *Reforming our Railways: Putting the Customer First*, p.45

<sup>121</sup> Transport Select Committee, *Rail franchising* (Ninth Report of Session 2016–17), HC 66, 5 February 2017, para 90

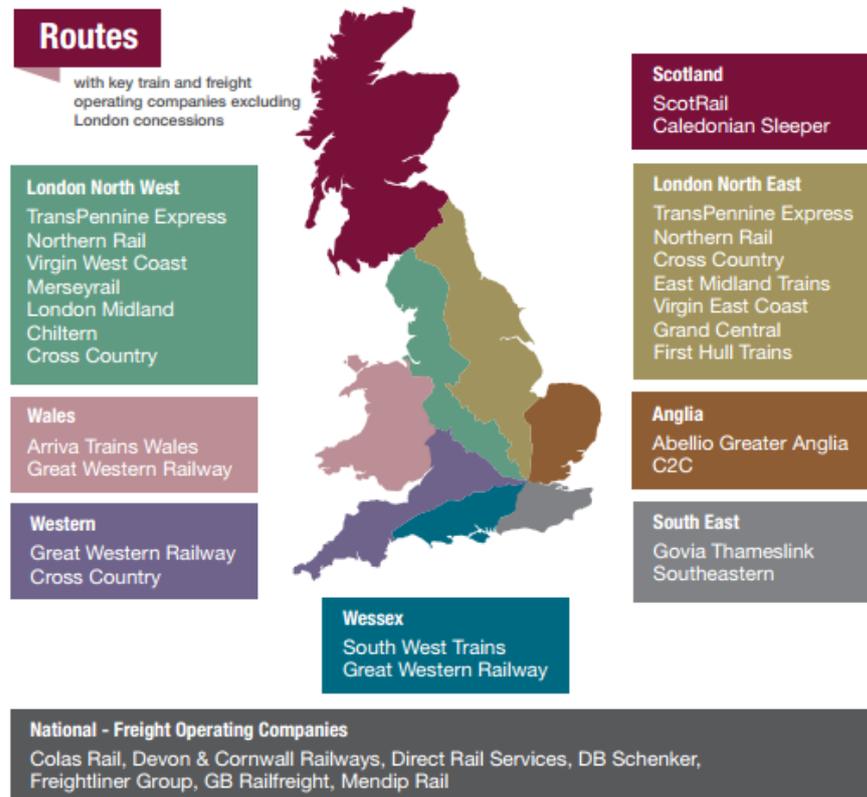
<sup>122</sup> Op cit., *Liberalisation of passenger services. Case Study – Britain*, p.33

<sup>123</sup> DfT, *The future shape and financing of Network Rail: The recommendations*, 16 March 2016; led by Nicola Shaw, the Chief Executive of High Speed 1

<sup>124</sup> e.g. McNulty (op cit., *Realising the Potential of GB Rail: Final Independent Report of the Rail Value for Money Study*, sections 23.1.2 and 25.2); ATOC (*A new structure for success on Britain's railway: An ATOC position paper on industry structural*

right – whatever their thoughts on whether the public or private sector should be running the railway – support greater local accountability and/or some sort of reintegration between infrastructure operations and train services, split at privatisation in the 1990s.<sup>125</sup>

NR has already taken steps in this direction. The company currently operates an organisational structure that combines devolution to geographical operating units known as ‘routes’ with centralised delivery of key support functions, as shown below:<sup>126</sup>



As Shaw explained in her scoping report:

... the routes are accountable for aspects of a number of functions including train operations, asset management, and maintenance as well as aspects of enhancements and renewals. It is worth noting, however, that at this level of analysis the routes are not solely accountable for any function, but share accountability with the centre – where the centre is generally responsible for overall strategy, professional standards and conducting performance benchmarking.<sup>127</sup>

In the 2015 Summer Budget the Government stated that devolution within NR was “a key priority for the company’s current leadership”, and the company’s stated ambition remained that of reducing the role

*reform*, March 2011, pp3-4) and the TUC (Transport for Quality of Life, *Rebuilding Rail*, June 2012, pp66-67 & 69

<sup>125</sup> “Network Rail ‘too big’, says Sir Richard Branson”, *BBC News*, 26 June 2015; and “Regulator proposes splitting Network Rail into eight businesses”, *Financial Times*, 15 July 2015

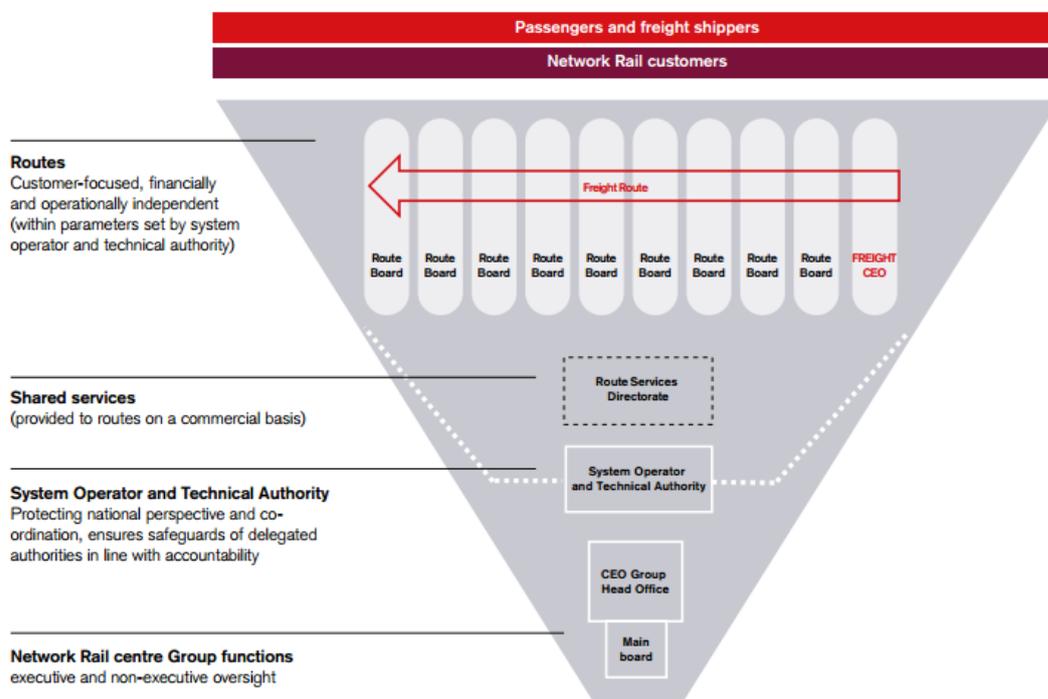
<sup>126</sup> from DfT, *The future shape and financing of Network Rail: The scope*, November 2015, p28

<sup>127</sup> *ibid.*, p29

of the centre and devolving greater responsibility to the route-level. The Government asked NR to continue with this process of decentralisation.<sup>128</sup>

To support this, NR began implementing plans for a new route-based operating model, which would provide routes with more scope in choosing what services they need from the centre and what services are best provided at a route level or by the wider market.<sup>129</sup>

Shaw's final report saw progress in this area in two ways. Firstly, on deeper route devolution, she proposed a new model of operation for NR, clearly showing the routes closer to their customers and more autonomous from the direct input of the centre:<sup>130</sup>



The second part of Shaw's recommendation in this area was to redraw the geographical scope of these routes to better map them onto devolved areas. She acknowledged that an 'ideal' geography was unlikely but argued that a new structure could and should:

- enable political accountability and support economic growth by directly aligning with one body or a small number of bodies that are responsible for transport and/or wider economic planning in the region;
- enable effective coordination between the route and train operators by aligning with a small number of train operators; and
- remain of a manageable size and scale for the Route CEO and top team to effectively and efficiently operate the network.<sup>131</sup>

<sup>128</sup> HMT, *Summer Budget 2015*, HC 264, 8 July 2015, para 1.255, para 57

<sup>129</sup> op cit., *The future shape and financing of Network Rail: The scope*, pp29-30

<sup>130</sup> op cit., *The future shape and financing of Network Rail: The recommendations*, p50

<sup>131</sup> ibid., p72

She also said that better-aligned local routes could leverage more sources of local funding for enhancements (e.g. developer contributions, local government borrowing, Business Rate Supplement, and Business Rate retention).<sup>132</sup>

### Current Government view, 2016-

In December 2016 the Secretary of State for Transport, Chris Grayling, announced the Government's support for the East-West Rail scheme.<sup>133</sup> He said that it would be a separate regulated entity from Network Rail, and a standalone vertically integrated railway, with private sector finance playing a key role in funding.<sup>134</sup>

He also indicated a desire for new franchises to implement joint management teams, which would include representatives from both the private train operator and Network Rail; though both entities would continue to exist independently from one another. As indicated above, this sort of model is better suited where there is one predominant operator on a network and fewer interfaces with other train companies. It is envisaged that the South Eastern and East Midlands franchises will be the first to implement these joint management teams when they are re-let in 2018. At present, legal and regulatory constraints mean that a joint venture model is not possible to implement in the short-term. The DfT is therefore likely to fall back on some form of an alliancing model, but it is unclear how this model would differ from the Network Rail alliance currently in place with Scotrail (and the previous alliance on South West Trains that has now been dissolved).<sup>135</sup>

## 2.6 Labour's alternative: public ownership

The Labour Party went into the 2017 General Election on a platform to:

Bring [...] our railways back into public ownership, as franchises expire or, in other cases, with franchise reviews or break clauses. We will introduce a Public Ownership of the Railways Bill to repeal the Railways Act 1993 under which the Conservatives privatised our railways [...] A publicly owned railway system can be the backbone of our plans for integrated transport. It will be built on the platform of Network Rail, which we will retain whole, working with the devolved administrations. We will ensure new rolling stock is publicly owned and will encourage expansion of public freight services in a publicly owned railway...<sup>136</sup>

This on the face of it is a proposal to reform the rail system along the lines set out in section 1.1, as a fully integrated, publicly owned monopoly.

<sup>132</sup> *ibid.*, p117

<sup>133</sup> [HCWS322](#), 6 December 2016; in 2007 when shadow transport spokesman, Mr Grayling had said that in hindsight it had been a mistake to separate track and train in the way that was done in the 1990s, see: "[Network Rail to lose sole control of rail maintenance](#)", *The Guardian*, 3 December 2016

<sup>134</sup> "[Grayling to reveal plans for fully privatised railway line](#)", *Rail Technology Magazine*, 6 December 2016

<sup>135</sup> "[On track towards an integrated railway?](#)", *Rail Professional Magazine*, 2016

<sup>136</sup> [Labour Party Manifesto 2017](#), pp90-91

In an article for the *New Statesman*, published on 11 May 2017 the Shadow Secretary of State for Transport, Andy McDonald, put the policy in context. He said that: “public transport has increasingly become detached from the concept of public service. Too often it is seen as a series of opportunities to profit from an essential service that no government can let fail”.<sup>137</sup> He went on:

The network of companies who operate passenger services on Britain’s railways – 75 per cent of which are foreign companies or foreign-owned state companies that extract profits from British taxpayers and commuters in order to reduce fares back home – come together in a jumbled network that drives up the cost of improvement works, complicates ticketing structures, slows ticketing reform and extracts eye-watering profits that could instead go on improvements or keeping fares down from the system. The hit to the pockets of commuters stands in stark contrast to the hundreds of millions of pounds in dividends paid to shareholders of private train companies each year.

The case for nationalisation is good economics, too. Last year, TUC research showed that the costs saved from bringing franchises which expire from 2016 to 2020 back in house could save up to £604 million a year by 2020, enough to lower regulated fares by up to 10 per cent.<sup>138</sup>

Labour’s policy builds on the work of a number of groups, notably the trade unions and their [Action for Rail campaign](#). One of the most cogent cases for bringing the railways back into public ownership is set out in the June 2012 report, *Rebuilding Rail*, commissioned by Aslef, the RMT, TSSA and Unite. It argued that the privatised railway is too expensive and too complex, leading to high ticket prices, inefficiencies and a service run for the benefit of shareholders rather than passengers. In summary, it said:

There is a widespread concern – shared across the political spectrum – that we are not getting good value from the substantial sums of public money that are invested in the railways every year. Since privatisation, the cost to the public purse of running the railways has risen by a factor of between two and three times ... Over the same period, the money going into the railways from passenger fares has also increased in real terms. Much of the increase in cost may be attributed to fundamental problems with the complex privatised railway structure created by the Conservative Government in 1994. Key reasons for the increase in cost include higher interest payments in order to keep Network Rail’s debts off the government balance sheet; debt write-offs; costs arising as a result of fragmentation of the rail system into many organisations; profit margins of complex tiers of contractors and sub-contractors; and dividend payments to private investors.

[...] The current structure of the railways affects passengers in several ways. Britain has Europe’s highest commuter fares for both day returns and season tickets. Ticket purchase is excessively complex. When things go wrong, there is a lack of clear accountability.

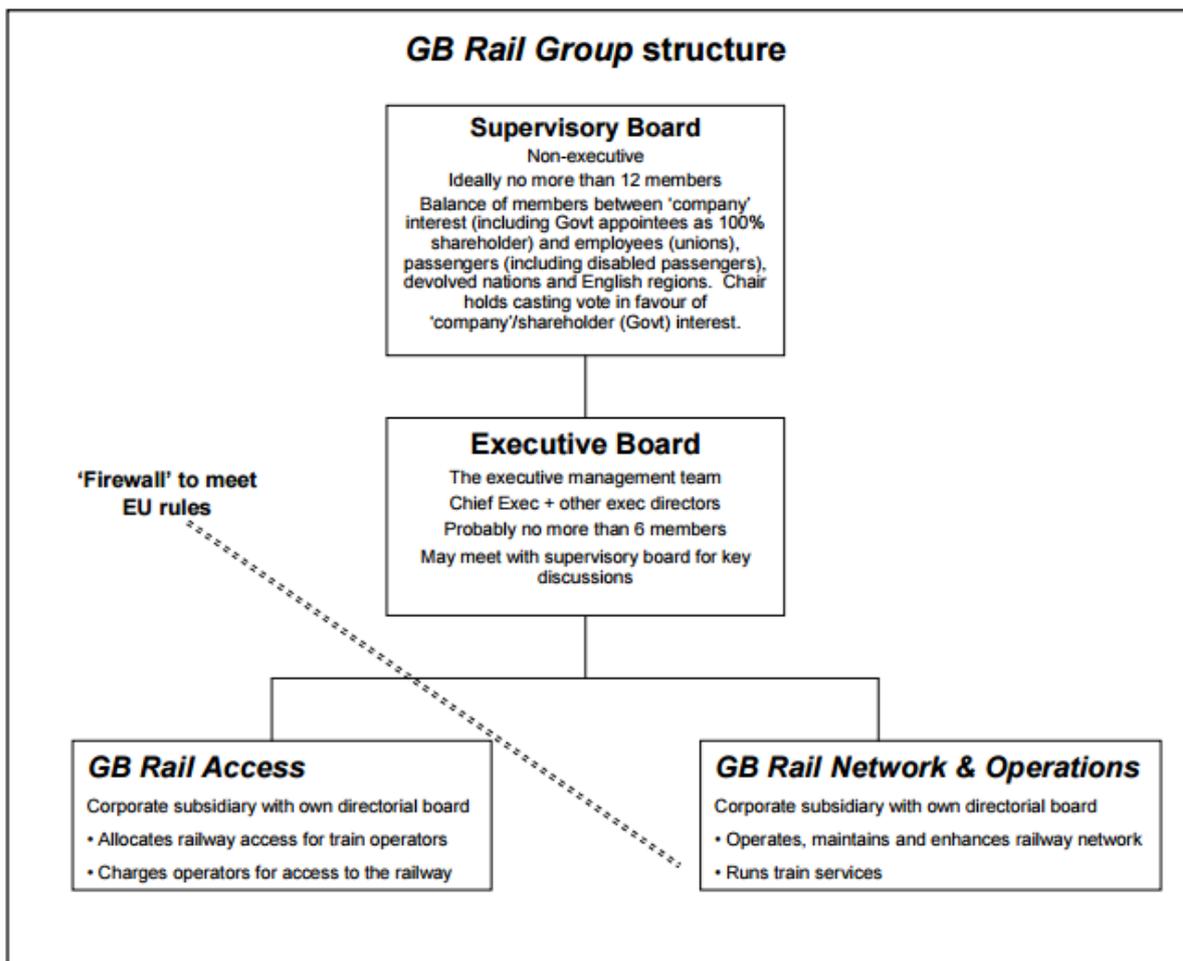
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<sup>137</sup> “[Passengers not profit: the case for public ownership](#)”, *New Statesman*, 11 May 2017

<sup>138</sup> *Ibid.*

[...] [I]nnovation is discouraged by the complex and fragmented structure of the privatised railway, and is more difficult now than it was before the railways were privatised. The hoped-for innovation has not materialised. Genuine at-risk private investment (as opposed to private capital expenditure that is underwritten by the Government) makes an insignificant contribution to the railways, representing of the order of one per cent of the total money that goes into the railway each year. This is substantially less than the additional costs posed by the privatised structure. Privatisation has also failed to increase the efficiency of the railways. Notably, this appears to be due to increased numbers of administrators and managers ... Fragmentation has produced duplication of functions in the different private companies and new staff to deal with all the interfaces between those companies.<sup>139</sup>

The report set out a possible governance structure for a future nationalised and integrated 'GB Rail', derived from the Deutsche Bahn governance structure in Germany (see above) but modified to give broader accountability. While we do not know what structure Labour would advocate, this gives us a reasonable example of the sort of thing it could look at:<sup>140</sup>



In effect, the system they proposed was one where the existing infrastructure manager, Network Rail (NR), would become GB Rail

<sup>139</sup> Op cit., [Rebuilding Rail](#), pp7-8

<sup>140</sup> Ibid., p72

Network & Operations, with its 'essential functions' of allocating and charging for network capacity hived off to GB Rail Access, but otherwise its current network operations could continue largely intact. Thereafter, the organisational changes to NR would centre around building its capacity to run train operations. It would also involve changes to rolling stock (train) procurement, whereby GB Rail would be able to procure new trains directly, using either government grant or government-backed debt. The report argued that procurement of rolling stock by GB Rail could be carried out in such a way as to support UK train manufacturing industry.<sup>141</sup>

A slightly different model was proposed by the Centre for Research on Socio-Cultural Change (CRESC) in 2013. They envisaged a more diffuse, regional model of rail provision to "provide a framework for political accountability and financial cross-subsidy as long as the railway system has to provide both an integrated national network and intra-regional services".<sup>142</sup> Some sort of regionally or locally owned and run public railway has received support from other sources.<sup>143</sup> The Co-operative Party and Co-operatives UK have championed a different sort of mutually-owned and run railway.<sup>144</sup>

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<sup>141</sup> *ibid.*, pp73-4

<sup>142</sup> CRESC, *The Great Train Robbery: privatisation and after*, June 2013, p162

<sup>143</sup> E.g. Compass, see [All on Board: A publicly owned railway for an interconnected world](#), July 2014 and Progress, see "[Make rail regional](#)", *Progress Online*, 9 July 2014

<sup>144</sup> Co-operatives UK, [Co-operative rail: a radical solution](#), *New Insight* 6, 2011, p21 [written by Christian Wolmar, the noted transport commentator who stood to be the Labour candidate for Mayor of London in 2016]

### 3. Structural reform in the EU

The separation between the infrastructure manager and the rail service provider has been a key feature of EU rail policy for many years. Underpinning this was the desire to end the idea of rail companies as natural monopolies. As discussed by the European Parliamentary Research Service:

Built upon the successful reform of other natural monopolies, such as the telephone and electricity utilities markets, the vertical separation principle aims to ensure the independence of infrastructure management from any rail company, to perform essential functions such as the allocation of rail capacity or charging for use of infrastructure.<sup>145</sup>

This principle was first enshrined in [Directive 91/440/EEC](#), which required a compulsory separation of accounts between infrastructure and transport entities, leaving institutional separation as an option. This implied that transport and infrastructure management services could be provided by a single legal entity but that at the same time, the accounts relating to these activities would have to be kept separate to avoid potential transfers of aid received from one area to the other.

It is not yet clear where the UK will be as regards EU-wide rail policy after Brexit. What, if any, EU law continues to be applied may depend a great deal on the final agreement reached. For more information on these issues see: HC Library briefing paper [CBP 7633](#).

#### 3.1 The Railway Packages

The EU has pursued a policy of gradually opening up railway services to competition through its four Railway Packages, with the aim of achieving full liberalisation.<sup>146</sup> However, as discussed by the OECD:

Although progress has clearly been made in formulating and implementing the EU Commission's Directives aimed at creating an open access rail market across the boundaries of the Union, the current status of the system lags significantly in developing effective competition between commercially driven enterprises in national or international freight markets and, even more so, in passenger markets.<sup>147</sup>

Enabling fair and non-discriminatory access to rail infrastructure and opening up rail services to competition would have had little effect without specific provisions governing effective access conditions. All conditions to access the rail market were specified in the Third Railway Package. Independent regulatory bodies were also established as part of the EU reform process. The precise structural arrangements vary from country to country but various regulatory functions (licensing, path allocation, infrastructure charging and monitoring of public service obligations) must be entrusted to bodies or firms that do not themselves provide any rail transport services.

In January 2013, the European Commission presented its [Fourth Railway Package](#), consisting of six legislative proposals, namely three Regulations and three Directives, accompanied by an overarching Communication. One of the key aims of the package was to enhance governance

<sup>145</sup> European Parliamentary Research Service, [The Fourth Railway Package: Another step towards a Single Railway Area](#), March 2016

<sup>146</sup> For more information see HC Library briefing paper [SN184](#)

<sup>147</sup> Op cit., [Recent developments in rail transportation services](#), p32

structures so as to ensure equal access to the infrastructure. Initially, the Commission wanted to introduce a strict separation between the infrastructure manager and the service operator. However, under pressure from some European countries and operators (particularly German DB and French SNCF operators), it stopped short of requiring all railways to implement what amounted to the Swedish model. A number of academics also criticised the approach of the Commission in seeking to legislate for full separation. Nash et. al (2014) commented that it did “not seem appropriate to adopt a policy of requiring all railways to be vertically separated as this will increase costs”.<sup>148</sup> Mizutani et. al (2014) found that the cost of imposing vertical separation, where it was not already in place, would increase EU-wide rail costs by around €6 billion per year.<sup>149</sup>

As a result, the final version of the proposal made no provision for mandatory institutional separation. Vertically integrated businesses are accepted (for instance in a holding company), provided that the infrastructure manager is fully independent and has effective decision-making rights.

The Commission had also sought to grant access rights to all EU rail operators on all domestic passenger markets, whereby rail companies would either offer competitive commercial services or participate in tendering procedures from December 2019. Reaching an agreement on this ‘Market Pillar’ of the Fourth Railway Package proved difficult. According to the European Parliamentary Research Service:

The long, ongoing, legislative process is a clear indication of the different viewpoints and of the debates between the Commission, the co-legislators, and other stakeholders, on how far harmonisation of rail governance structures and rail liberalisation should go. The abandon of the flagship project of mandatory unbundling initially proposed by the Commission is a sufficiently telling example in this regard.<sup>150</sup>

The European Parliament voted on 14 December 2016 to adopt the final wording for the Market Pillar of the Fourth Railway Package, concluding “almost five years of intense negotiations”.<sup>151</sup> Despite agreement, its actual effect remains unknown to a great extent.

Essentially it means that anyone would be able to bid to compete on a commercially viable EU rail network from 2020, as already happens in GB (e.g. open access operators bidding to run services on the East and West Coast Main Lines to compete with the services offered by the franchised operator).

From 2026 private companies would also be able to bid for public service contracts that are awarded by governments on lines that are not

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<sup>148</sup> Op cit., “[Structural reforms in the railways: incentive misalignment and cost implications](#)”, pp16-23

<sup>149</sup> Op cit., “[Comparing the costs of vertical separation, integration, and intermediate organisational structures in European and East Asian railways](#)”, p32

<sup>150</sup> Op cit., [The Fourth Railway Package: Another step towards a Single Railway Area](#), p27

<sup>151</sup> “[The Fourth Railway Package market pillar - a level playing field or more of the same?](#)”, *International Railway Journal*, 17 January 2017

as profitable. At the moment, the majority of domestic rail lines across the EU are operated under public service contracts. This involves countries often directly awarding rail contracts to the local incumbent, which is either compensated or granted exclusive rights on the line.

The Commission's original proposal would have introduced mandatory competitive tendering for such rail contracts (i.e. the GB system). However, opposition from Member States resulted in changes which mean that governments will be able to directly award contracts where the geographical characteristics are such that it would result in service improvements, or where they do not receive enough bids.

In announcing agreement on the Market Pillar in October 2016 the Council said that competitive tendering would "become the norm for public service contracts, with some exceptions. Direct award will still be possible where it leads to better quality of service or cost efficiency". To ensure 'continuous and well-functioning services', Member States would also be able to limit a new operator's right of access if the proposed new service "would compromise the 'economic equilibrium' of an existing public service contract".<sup>152</sup>

The continued relevance of these provisions in the UK depends entirely on whether the UK negotiates some sort of EU exit agreement that includes an exemption from the Market Pillar (like e.g. Switzerland). This in turn would then mean that a future government that was so inclined could renationalise the railways under a unified structure (i.e. merge track and trains) along the lines set out in section 1.1, above. It would also allow privately-run companies to run 'vertically aligned' rail services across the country, again if a future government were so inclined.

### 3.2 Structural models in the EU

With the exception of Ireland and Northern Ireland, all EU Member States have implemented railway reforms. The separation between infrastructure managers and rail operators, intended to ensure equal treatment of all rail service providers, has been heterogeneously transposed in the different States. From these reforms, three broad models with individual variations have emerged:

<b>Structural models in the EU</b>		
<i>Vertically separated</i>	<i>Independent Infrastructure Manager, One Dominant Operator</i>	<i>Integrated, with legal and accounting separation</i>
Sweden	France	Germany
United Kingdom	Estonia	Austria
Bulgaria	Belgium	Italy
Czech Republic	Hungary	Poland
Denmark	Latvia	
Finland	Luxembourg	
Greece	Slovenia	

<sup>152</sup> European Council press notice, "[Better rail services: Council adopts 4th railway package market pillar](#)", 17 October 2016

Lithuania		
Portugal		
Romania		
Slovakia		
Spain		
Netherlands		
Source: European Commission: SWD accompanying the 2012 report from the Commission on monitoring development of the rail market, <a href="#">Annex 2</a> , SWD(2012) 246 final/2.		

The most recent summary of the infrastructure management of and private sector involvement with EU rail systems can be found in the [Fifth report on monitoring development in the rail market](#), COM(2016) 780 final, 8 December 2016.

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