

# The Wheels Keep on Turning: Is the end of rail franchising in Britain in sight?

**John Preston**\*

\* Corresponding author: Faculty of Engineering and the Environment, University of Southampton, Building 176, Boldrewood, Burgess Road, Southampton, SO16 7QF, UK. +44(0)238059 4660. [jpreston@soton.ac.uk](mailto:jpreston@soton.ac.uk)

## **Keywords**

Rail, Franchising, Contract, Incentives.

## **Classification codes**

L51 Economics of regulation, L92 Railroads and other surface transportation

## **ABSTRACT**

The regime of passenger rail franchising in Britain, in actual fact a form of competitive tendering, has been in place for over 20 years. The developments have been reported at past Thredbo Conferences, including by the author in 2007 and 2015. The franchising regime has been remarkably resilient and has been through at least five phases. Using the concept of regulatory cycles, this paper reviews the prospects for a sixth and possibly final phase.

Rail statistics are reviewed and a welfare analysis of rail franchising is undertaken, building on and updating work presented at the Thredbo Conference in 2011. This suggests that franchising has been modestly welfare enhancing over the substantive phases of franchising to date, even though the transaction costs associated with the competition are substantial and apparently increasing.

However, there remain concerns. Train operating costs remain high and there is strong Union resistance to technologies such as Driver Only Operation. This is currently manifesting itself in terms of industrial disputes and poor service delivery on the Southern franchise. There are also concerns about the costs that vertical separation of operations and infrastructure impose on the system and there are plans for experiments with forms of integration, not least for the proposed East-West railway, despite the apparent failure of the Wessex virtual alliance. The commissioning of High Speed 2 may well change the franchising model for many mainline railways, whilst the Competition and Markets Authority continues to push for more open access.

Given this back drop, this paper will consider the pros and cons of alternative regimes, including public and/or private concessions.

## **1. Introduction**

This paper builds on work presented at previous Thredbo conferences and subsequently published in Research in Transportation Economics (Preston, 2008, 2016, Preston and Robins, 2013). It is structured as follows. In section 2, a very brief history of rail franchising (and of open competition) in Great Britain is provided, whilst in section 3 some key trends are reviewed. In section 4, a welfare analysis is undertaken in an attempt to assess whether franchising has been beneficial to society as a whole. In section 5, we discuss some issues concerning competition, contracts and costs, whilst in section 6 we review franchising futures. In section 7, we draw some conclusions.

## 2. A Brief History (Again)

The history of rail franchising in Britain and elsewhere has been well recorded both by the author (Preston, 2001a, 2008, 2016) and that of others (Knowles, 2004, 2013, Smith et al., 2009, Nash and Smith, 2007, 2011, Jupe, 2010, Müller, 2011). However, it also needs to be positioned within the wider literature on competition and ownership in rail transport (see, for example, Thompson, 2003).

### 2.1 Franchising

We have argued elsewhere that rail franchising has consisted of five phases to date (Preston, 2016), as shown by Table 1. The first phase ran from 1996 to around 2000 and was associated with the Office of Passenger Rail Franchising (OPRAF). State owned national passenger rail operations were horizontally separated into 25 Train Operating Companies (TOCs) and franchised to the private sector in a period of a little more than a year in 1996/7. These franchises were typically of seven year duration and heavily proscribed, particularly in terms of minimum service levels. Initial assessment indicated that this phase was welfare positive (Pollitt and Smith, 2002).

The privatisation of rail in Britain was associated with John Major's Conservative Government. The election of Tony Blair's new Labour Government in 1997 eventually led to a change in emphasis and the second phase of franchising that operated from around 2001 to 2004. New Labour were committed to dealing with the railways as they found them and this meant in practice providing greater direction by replacing OPRAF with the Strategic Rail Authority (SRA). Over this period, nine TOCs were re-franchised, with an emphasis, at least initially, on longer and more open contracts. However, this second phase was overtaken by the events that were triggered by the Hatfield rail accident in October 2000 which resulted in the privatised track authority, Railtrack, being placed into administration and being eventually replaced some two years later by Network Rail, initially a hybrid organisation set up as a company limited by guarantee. Cost increases were incurred for both infrastructure and operations and largely as a consequence one franchise failed (Connex South Eastern), whilst 13 were renegotiated in one form or another.

As a result, Government took greater control of the rail system in the third phase of rail franchising that ran from around 2005 to 2012. The SRA was abolished and its functions largely transferred to the Department for Transport (DfT). Over this period 12 TOCs were re-franchised, with in most cases a cap and collar risk-sharing scheme implemented to overcome concerns that post-Hatfield bidders would be excessively risk averse. These arrangements, which typically came into operation after four years of a franchise, involved TOCs sharing 50% of any fares revenue above 102% of the bid profile with the DfT (the cap). Conversely, DfT would make-up 50% of any revenue shortfalls between 96% and 98% of the bid profile and 80% of shortfalls below 96% (the collar). The outcome was that these arrangements seemed to encourage strategic behaviour, with bids backloaded in terms of premium payments and reliant on large revenue growth. There may have been incentives to overstate both revenue and costs at the bidding stage. There were also concerns that subsidy at the beginning of a franchise was being used to finance Parent Group activity and that, once the collar was invoked, the incentive to grow revenue was muted. The problems were symbolised by the successive failures of the TOC operating services on the East Coast Main Line; GNER (in 2007) and National Express East Coast (in 2009) (Preston, 2016, McCartney and Stittle, 2011). The current incumbent, Virgin Trains East Coast, was also reported to be facing financial difficulties in the summer of 2017 (Ford, 2017).

Given problems with the cap and collar regime a fourth phase of franchising was introduced in 2012, with the introduction of the Subordinated Loan Facility (SLF), in essence a bond that was designed to discourage overoptimistic bidding. However, the first application for the

West Coast franchise revealed errors in the calculation of the SLF, the subsequent cancellation of the West Coast franchise, the suspension of the overall franchising programme and the instigation of the Laidlaw Enquiry (HC 809, 2012) and the Brown Review (Cm8526, 2013) (see also Jupe, 2013).

The fifth phase of franchising commenced in 2014, with the DfT taking what might be described as a horses for course approach. As of spring 2017, there have been eight re-franchises<sup>1</sup> let, in addition to some 12 direct awards to bridge the gaps caused by the suspension of the fourth phase of franchising. In order of risk increasing with the TOC, this phase has included management contracts (e.g. West Coast since 2012), legacy cap and collar arrangements (e.g. Southern up to 2015), new revenue risk sharing arrangement (e.g. Thameslink from 2014), revenue share and support (e.g. Greater Anglia), GDP based mechanisms (e.g. East Coast) and all risks with the TOC (e.g. Essex Thameside). A further seven awards are expected by 2022.

Overall, the evolution of franchising has seen a lot of changes. The number of TOCs has reduced from 25 to 18, largely in an attempt to reduce the number of operators at London termini. Re-franchising has involved a lot of turnover, with the incumbent often losing the franchise (as with Stagecoach and the South Western franchise in 2017). Another feature has been the growth of the role of foreign ownership – currently 11 of the TOCs have some form of foreign control, including the involvement of the state operators from France, Germany, Italy and the Netherlands.

**Table 1: The Five Phases of Rail Franchising**

Phase	Dates	Responsible Authority	Achievements	Assessment
1	1996 – 2000	OPRAF	25 franchises let	Initial success
2	2001 – 2004	SRA	9 franchises re-let, 1 failure, 13 renegotiated.	Cost over-runs post Hatfield.
3	2005 – 2012	DfT – Cap and Collar	12 franchises re-let. 2 failures	Revenue short-falls.
4	2012 – 2013	DfT – SLF	1 cancellation	Short comings in evaluation
5	2014 –	DfT – Horses for courses	9 franchises re-let by summer 2017. 6 more by 2022.	12 Direct awards.

## 2.2 Open Access

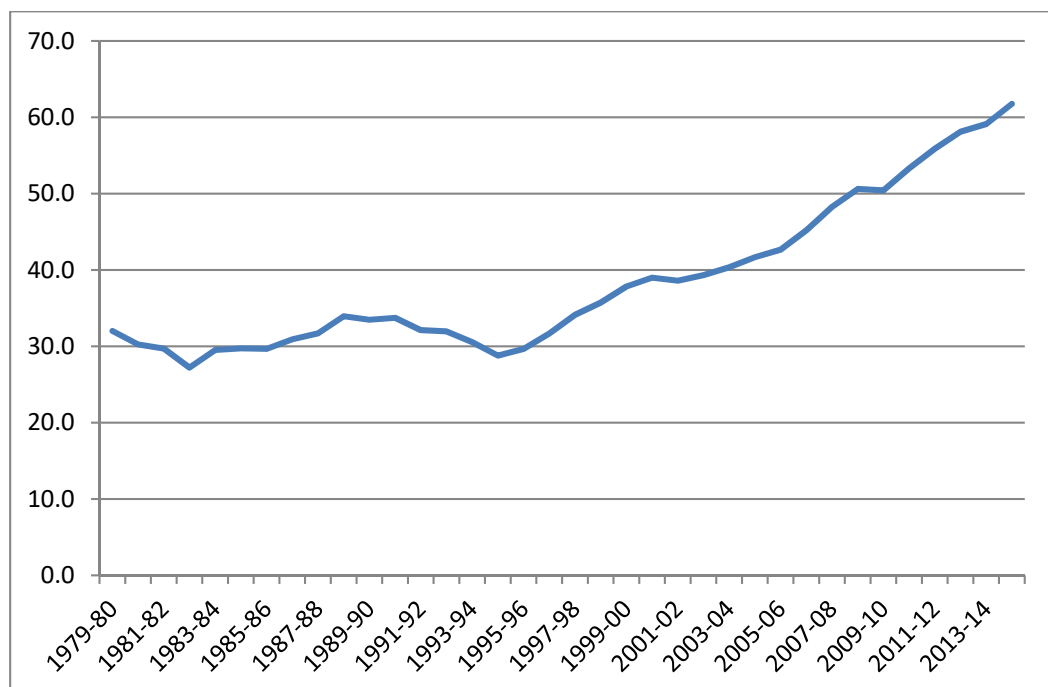
An unusual feature of rail franchising in Britain is that this competition for the market has been accompanied by competition in the market, albeit competition that is heavily controlled by a regulatory body, ORR (currently Office of Rail and Road). In the first phase of moderation of competition, which ran from 1994 to 1999, competition was limited to flows that constituted less than 0.2% of a TOC’s revenue. In the second phase of moderation of competition, which ran between 1999 and 2002, competition was permitted on up to 20% of a TOC’s registered revenue. This permitted the development of niche operations on main lines to/from London such as Hull Trains that started operations in 2000 and were bought by First Group in 2003. The third phase of moderation of competition that has run since 2003

<sup>1</sup> 2014: Essex Thameside, Thameslink Southern Great Northern, East Coast. 2015: Northern, Transpennine Express, Scotrail. 2016: East Anglia. 2017 (to date): South Western, London Midland.

has seen ORR adopt a case by case approach based on the not primarily abstractive test. Further niche operations have developed with Grand Central Trains starting services to Sunderland in 2007 and Bradford in 2010 and being bought out by Arriva in 2011. There were also open access services to Shrewsbury and Wrexham between 2008 and 2011. Alliance Rail proposed services to Blackpool from 2018, but has been unable to procure the rolling stock required, whilst First Group has been awarded paths to Edinburgh, but not until 2021, whilst there are also proposals for open access services to Southampton. Overall open access operations are modest, accounting for less than 1% of passenger train kilometres in 2015/16 but for up to 15% of long distance services on the East Coast Main Line. However, they do appear to have cost advantages (Rasmussen et al., 2015) and may have an impact on the franchised market, at least for main line services to London.

### 3. Trends

The key trends in the passenger rail market in Britain have been well documented and here are based on the work of Syarifuddin (2016), drawing largely from data from ORR National Rail Trends<sup>2</sup>. The results are shown in Figures 1 to 6 and summarised by Table 2.



**Figure 1: Passenger Demand (Billion Kms)**

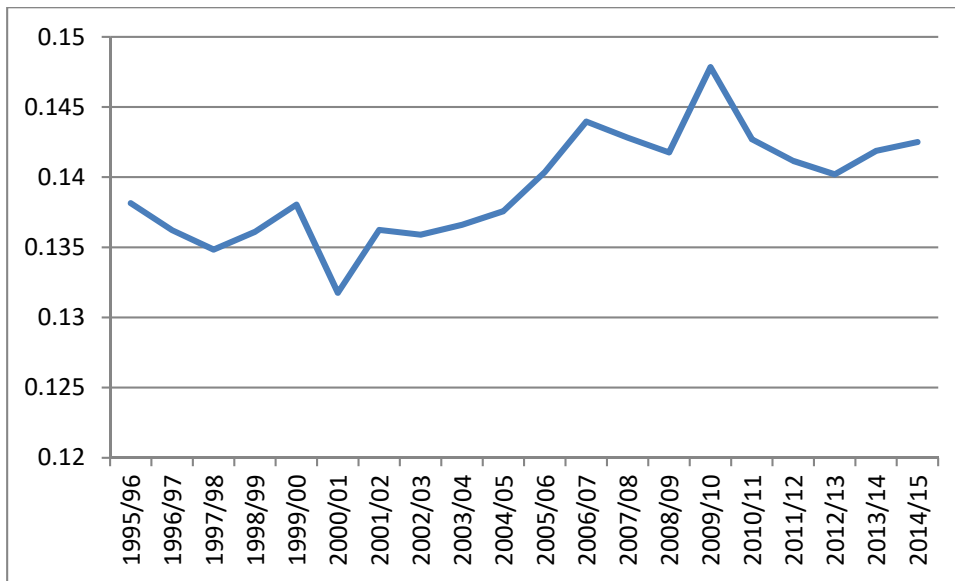
Figure 1 illustrates the fact that passenger demand has broadly doubled since the introduction of franchising, with growth during all phases, but particularly strong growth in phases 1 and 3. Some of this growth will be due to exogenous factors, notably rising incomes for most of the period (but not around 2008) and rising road journey times. The latest data shows further growth of almost 5% (to Quarter 3, 2016/17).

Figure 2 shows receipts per passenger km, which we use as a proxy for fares. This shows a broadly stable pattern (with just a 3% increase over the whole period) but with a decrease in the first phase of franchising (due to fares regulation<sup>3</sup>) and modest rise thereafter. It should though be noted that the increase in mean receipts will be moderated by the increased

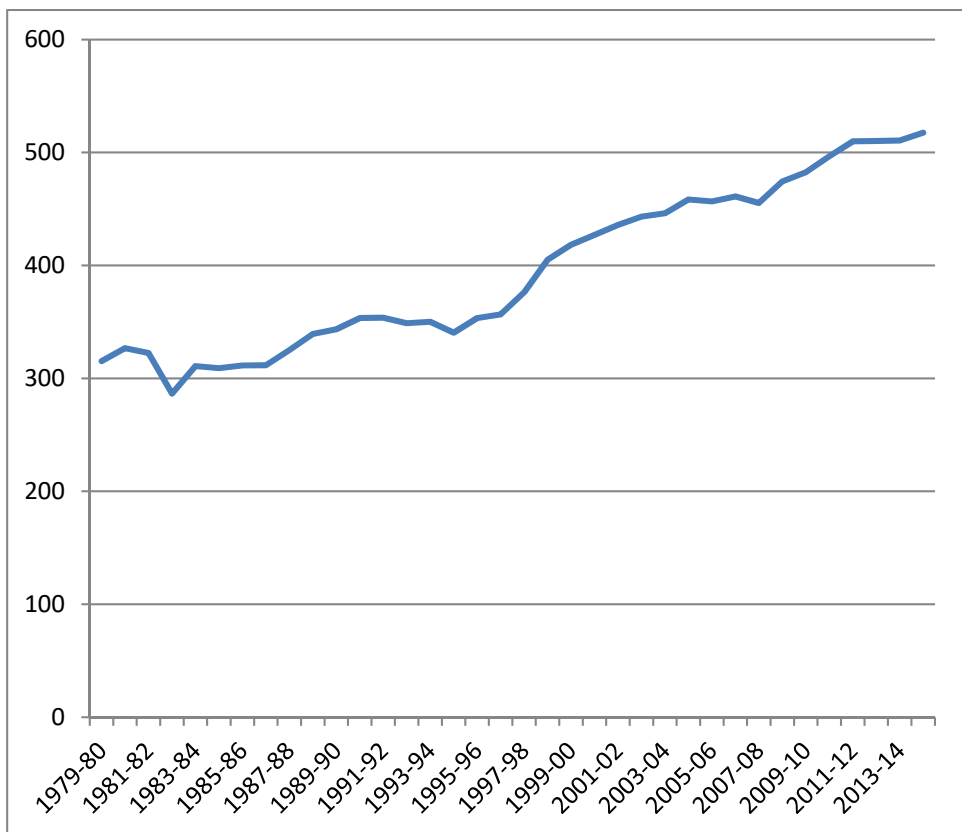
<sup>2</sup><http://dataportal.orr.gov.uk/>

<sup>3</sup> Around 50% of all fares are regulated, with increases being limited to RPI between 1996 and 1998, and to RPI-1% between 1999 and 2003. Since 2004, increases of up to RPI+1% have been permitted.

prevalence of advanced purchase discounted tickets. As a result, ORR's fares index shows substantial increases in real terms over this period.

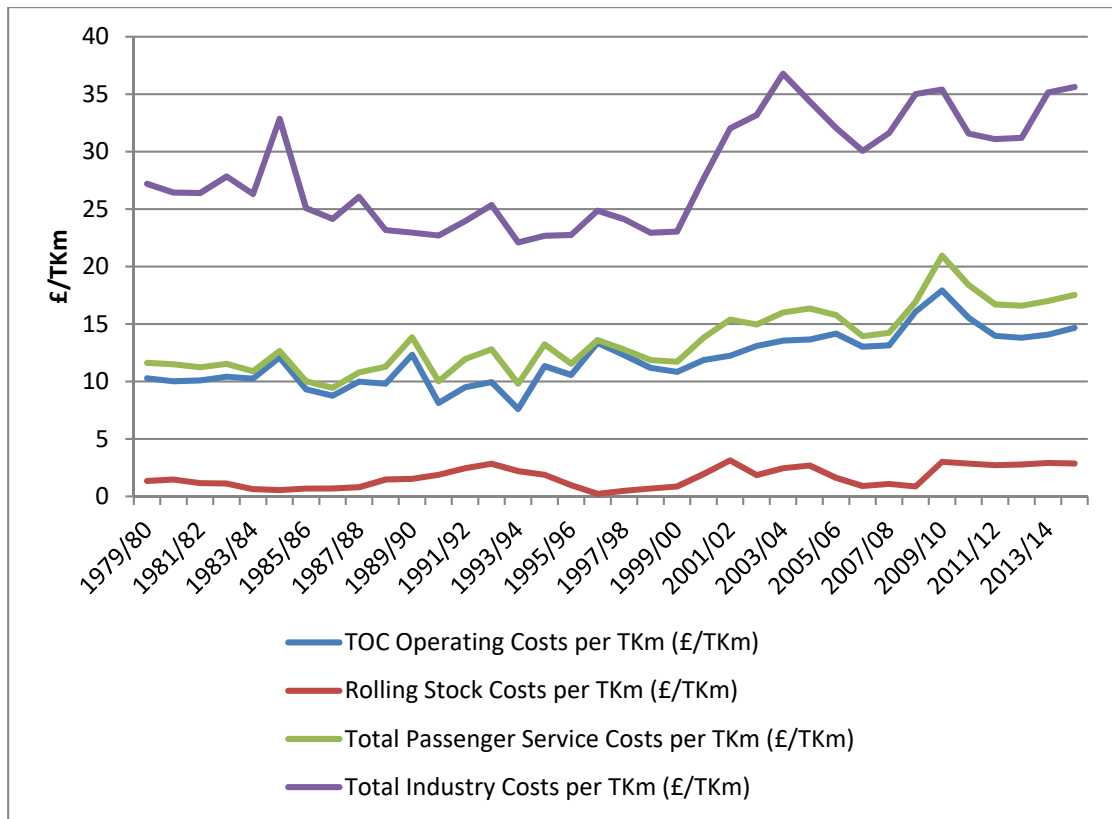


**Figure 2: Receipts per Passenger Km (£, 2014 prices).**



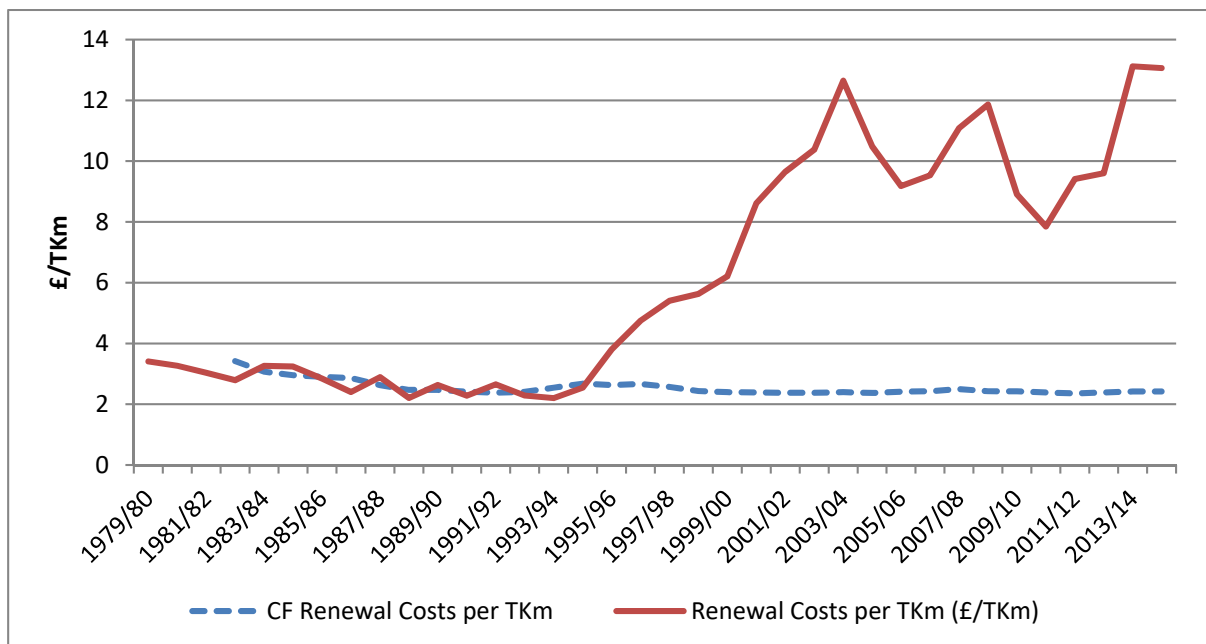
**Figure 3: Passenger Rail Supply (Train Kms, million).**

Figure 3 indicates that since the introduction of franchising there has been an almost 50% increase in train kilometres operated on the network, but that this increase was focused on the first three phases of franchising, with a hint that in key parts of the network capacity limits have been reached, with concerns that decreasing returns to density are being exhibited.

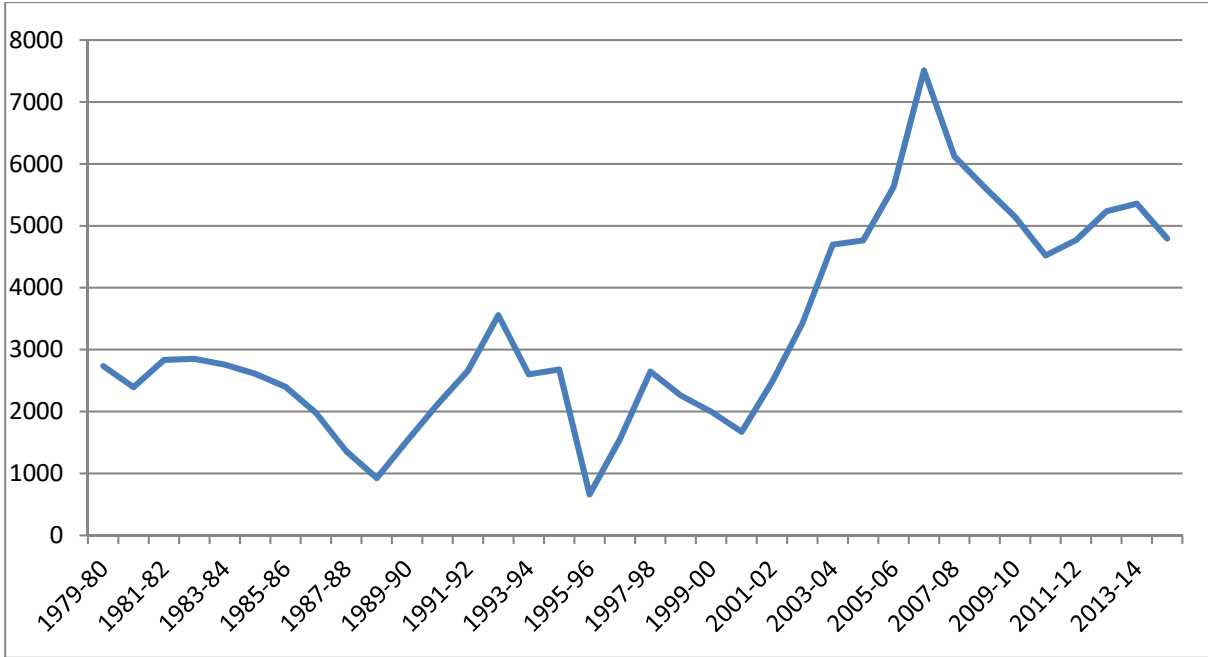


**Figure 4: Average Costs of Rail Operations (£ per Train Km, 2014 prices).**

Figure 4 shows that the average cost of rail operations has increased by over 50% since the introduction of franchising, with most of the increase occurring in the first two phases of franchising. Figure 5 shows that much (but not all) of this increase was related to infrastructure renewal costs, with the increase pre-dating Hatfield in 2000. If pre-privatisation trends had been maintained, the counterfactual indicates that modest reductions in infrastructure renewal costs might have been expected.



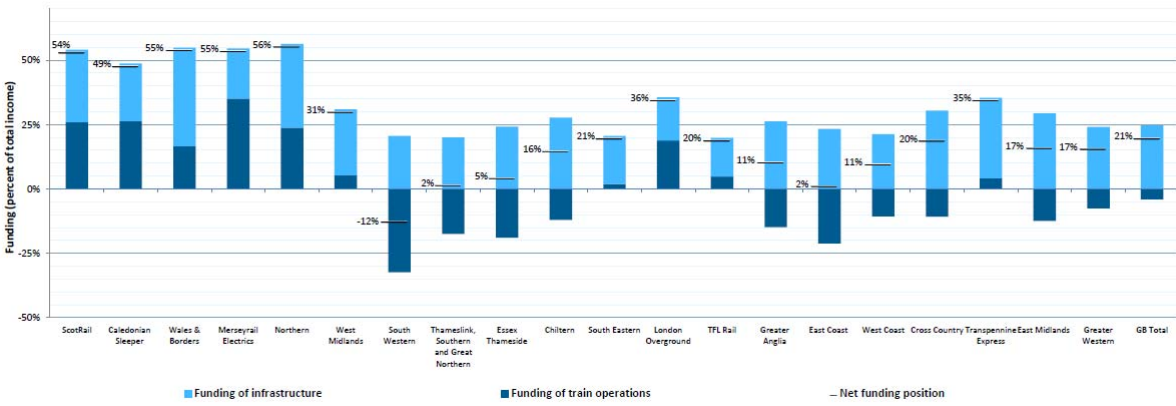
**Figure 5: Actual and Counterfactual Renewal Costs (£ per Train Km, 2014 prices)**



**Figure 6: Government Support to the Railways (£ million, 2014 prices).**  
 Note: this is total support – most of which (particularly post 2000) is to cover infrastructure costs.

If we use 1994/95 as the base year (as 1995/6 is distorted by privatisation receipts), overall Government support to the railways has increased by almost 80% in real terms. There was a decrease in support in the first phase of franchising (as might be expected from experience in other countries and sectors) but a more than doubling in the second phase, since when support has been broadly constant.

Some recent data for 2015/16 are presented in Figure 7. This shows that of the 20 TOCs listed (including Caledonian Sleepers and TfL Rail), around 10 are in receipt of subsidy and 10 are paying a premium. Only one TOC has full cost recovery, with South Western paying 12% of its total income to Government. By contrast, for Northern around 56% of total income comes from Government.



**Figure 7: Funding of TOCs 2015/16 (Source: ORR)**

**Table 2: Key Trends by Franchise Phase (% change)**

Franchise Phase	Dates	Demand	Real receipts per pass km	Supply	Real unit costs	Real support
1	95/96-00/01	+31	-5	+21	+20	-38 <sup>4</sup>
2	01/02-04/05	+7	+4	+7	+18	+185
3	05/06-11/12	+34	+3	+11	+2	0
4/5	12/13-14/15	+10	+1	+1	+5	+1
TOTAL		+108	+3	+46	+52	+79

The main expected impact of competition for the market is reduced unit cost. For example, in Germany and Sweden rail tendering led to 20-30% savings (Alexanderson, 2009, and Alexandersson and Hulten, 2007) whilst in the Netherlands rail tendering led to 20-50% savings (van Dijk, 2007). Bus tendering in Great Britain led to unit cost reductions of up to 50% up to 2000, although there have been increases since, whilst elsewhere reductions of 35% were typical where there is also restructuring (Preston, 2005). This is in line with the finding that competitive tendering in other industries such as waste collection and hospital services led to savings of 20-30% (Domberger et al., 1986, 1987). However, Table 2 shows that there has not been a reduction of real unit costs under any of the phases of franchising, although there were reductions in Governmental support in the first phase, reflecting early reductions in costs (Cowie, 2009).

#### 4. Welfare Assessment

Our welfare assessment is an update of the analysis in Preston and Robins (2013) which in turn built on the work of others (e.g. Wardman, 2006). This methodology consists of a demand forecasting model to determine the extent to which changes can be associated with the privatisation policy package and to assess changes in consumer surplus and total revenue. Extrapolative moving average models are used to determine the counterfactual trends in fares, train kilometres, operating costs and capital costs. The demand forecasting model was based on a simple negative exponential or semi-log time series formulation as follows:

$$\ln PKM_t = \alpha + \beta RPKM_t + \gamma TKM_t + \delta GDP_t + \theta PRIV + \mu HAT + \rho STRIKE \quad (1)$$

where  $PKM_t$  = Passenger Kilometres in year t,  $RPKM_t$  = Real Revenue per Passenger Kilometre in year t,  $TKM_t$  = Train Kilometres in year t,  $GDP_t$  = Real Gross Domestic Product in year t,  $PRIV$  = Privatisation Dummy Variable (1993/4 to 2005/6),  $HAT$  = Hatfield Dummy Variable (2000/1 to 2006/7) and  $STRIKE$  = Strikes Dummy Variable (1982/3 and 1991/2). The estimated coefficients of equation 1, using data from 1979/80 to 2014/15, and some diagnostic statistics are given in Table 3.

<sup>4</sup> Based on 1994/95.



**Table 3: Forecasting Model Parameters**

Coefficient	Value	t-statistic
$\alpha$	2.874	18.498
$\beta$	-4.779	-3.255
$\gamma$	0.003	9.973
$\delta$	2.16E-07	2.652
$\theta$	-0.089	-6.995
$\mu$	-0.057	-3.793
$\rho$	-0.063	-2.923
Adjusted R <sup>2</sup>	0.988	
Durbin-Watson	1.439	

All parameters are statistically significant (at the 5% level), the model explains almost 99% of variation in the data and autocorrelation does not appear to be a problem. The dummy variables in the model indicate that privatisation suppressed demand between 1993/4 and 2005/6 by around 8.5% ( $1 - \exp \theta$ ) whilst the Hatfield accident suppressed demand between 2000/1 and 2006/7 by a further 5.5% ( $1 - \exp \mu$ ). The strikes in the years 1992/3 (ASLEF – train drivers) and 1991/2 (RMT - signalmen) were estimated to reduce demand by around 6.1% ( $1 - \exp \rho$ ). A feature of the negative exponential specification is that demand elasticities are directly proportional to the relevant policy variables. At the mean values in the data, the elasticity of demand with respect to RPKM was computed to be -0.63, with respect to TKM it was calculated to be 1.15 and with respect to GDP it was found to be 0.28. These values are broadly consistent with those of some other studies (e.g. Whelan et al., 2010), although it appeared that the TKM and GDP elasticity estimates may be affected by multicollinearity.

The counterfactual estimates for fares, train kilometres and infrastructure and train operating costs are based on trend analysis of five year moving averages (after Burton et al., 2002). Using the model in Table 3 in conjunction with counterfactual assumptions concerning train km and fares, in combination with actual growth in GDP, suggests that around 35% of the increase in demand would have occurred in any event.

We then calculate the change in welfare as:

$$\Delta W = \Delta CS + \Delta TR - \Delta TC \tag{2}$$

where  $W$  = Welfare,  $CS$  = Consumer Surplus,  $TR$  = Total Revenue,  $TC$  = Total Costs. All values are expressed in 2014 prices and  $\Delta$  refers to the difference between the actual outcome and the counterfactual.

Consumer surplus can be estimated directly from equation (1) as:

$$CS = \int_{RPKM}^{Max} PKM dRPKM = -\frac{1}{\beta} PKM \tag{3}$$

The abridged results of our analysis are shown in Table 4.

**Table 4: Changes in Welfare as a result of Rail Franchising (Present Value (PV), £ billion, 2014 prices)**

	<b>Overall (<math>\Delta W</math>)</b>	<b>Increase in Infrastructure Costs</b>	<b>Net Effect (Per year in brackets)</b>
1995/6 – 2000/1	+2.2	+1.4	+3.6 (+0.6)
2001/2 – 2004/5	-11.7	+12.1	+0.4 (+0.1)
2005/6 – 2011/12	-8.0	+13.0	+5.0 (+0.7)
2012/13 – 2014/15	-1.9	+6.4	+4.5 (+1.5)
<b>Total</b>	<b>-19.4</b>	<b>+32.9</b>	<b>+13.5 (+0.7)</b>

It can be seen that overall welfare has reduced by over £19 billion PV over 20 years (using a 3.5% interest rate). However, the main cause of this outcome was the substantial increase in infrastructure costs compared to the counterfactual of over £33 billion PV over the 20 year study period. It could be argued that the cost increases here are nothing to do with the franchising process and instead relate to the way that the rail infrastructure industry was re-organised and privatised. If this is accepted (and there are counter arguments that vertical separation was a necessary pre-cursor for contracting out of train operations), then franchising may have welfare benefits of up £14 billion PV. Furthermore, all franchising phases are welfare positive, although only just in the case of the second phase. Despite discounting, the greatest benefits per annum appear to be in the most recent phases.

However, franchising is not a costless transaction. Evidence to the Transport Select Committee indicated that the costs per bid were as high as £5 million in 2006 and £10 million in 2012. Previous work has indicated that there were 5.4 bids per franchise in the first phase, 4.2 bids in the second phase and 3.8 bids for the third phase. Comparable data are not available for the fourth and fifth phases but the trade press indicate two bids per franchise has become the norm, although there is now a more onerous pre-qualification phase. If we assume that the franchisor incurs costs equivalent to one bidder per round, then we estimate these transaction costs as £800 million in phase one, £234 million in phase two, £576 million in phase three and £210 million in phases four and five (up to 2015). This gives total costs of £1.82 billion, based on some 43 franchise competitions. This does not include the costs associated with dealing with the three franchise failures or the 25 renegotiations and direct awards. Moreover it does not include the set-up (and shut down) costs of OPRAF, SRA and DfT Rail. For example, the Public Accounts Committee estimated that the West Coast franchise cancellation resulted in costs of over £50 million. Although it is unlikely that such costs completely cancel out the welfare benefits of franchising, it is conceivable that they may have done so for phase two.

## **5. Competition, Costs and Contracts**

We have seen above that franchising has been competitive, but competition has declined over time. It is of academic (but possibly also practical) interest to determine whether rail franchises are a common value or a private value auction (see, for example Wilson, 1992). We have argued previously that rail franchising may have features of a private (or independent) value auction in which, assuming all bidders are risk neutral, the winning bid increases (level of subsidy required reduces) with the number of bidders because a franchise will have more value for certain bidders (Preston et al., 2000). In addition the

winning bid will decrease as the variance of the bid value distribution increases (i.e. the interval between bids increases) (McAfee and McMillan, 1987).

However, there does not appear to be evidence that prices are going down (subsidy is increasing) as the number of bidders is reducing. Indeed the net premium that the DfT is receiving has increased in recent years from £316 million in 2010/11 to £622 million in 2015/16, in out-turn prices (ORR, 2012, 2017). This suggests that franchising could be a common value auction in which the winning bid can come down (i.e. subsidy goes up) as the number of bidders increases in order to avoid the winner's curse. If this is the case, then competition does not matter, or at least does not matter in the expected direction, although in reality as the number of bidders increases the probability of a risk taker bidding also increases. Another factor is that size of the franchise may affect the auction value. It is conceivable that small, geographic specific franchises are of more value to certain bidders, whilst larger franchises only attract the attention of large holding companies that have common approaches to valuation.

With respect to size, it should be noted that British franchises are relatively large – on average around 22.5 million train kms, compared to 3.3 million in Germany and 2.6 million in Sweden (Nash et al., 2013) – and have been getting larger. The combined Thameslink, Southern and Great Northern franchise operates on around 20% of the national rail network. The initial wisdom was that franchises were too small – splitting passenger rail operations into 25 was likely to result in losses of economies of scale. Early comparative modelling work at a European scale seemed to confirm this (SORT-IT, 1999), suggesting something like five or six operators was a more optimal number for Great Britain. Subsequent and more detailed work on TOC costs by Smith and Wheat (2012) seemed to be in broad agreement. However, these analyses did not take into account service heterogeneity, such as speed, rolling stock type, train length etc. When Wheat and Smith (2015) do this, they conclude that there may be some benefits from having smaller franchises. There may also be some advantages of eliminating franchise overlaps where they increase service density but do not increase heterogeneity. As an aside, it is worth noting that a potential advantage of high speed rail is that, by removing the fastest trains from classic rail, it can increase service homogeneity. If Wheat and Smith's analysis is correct, the decision to combine both classic and high speed services in the proposed West Coast Partnership franchise, although having some advantages in terms of strategic planning, may not be efficient in terms of operating costs.

The theoretical work in Preston et al. (2000) suggested that longer contracts would require less subsidy. This is supported by some empirical work in Germany (Link, 2016), largely related to efficiencies in rolling stock provision. Similarly, Smith and Wheat (2012) indicate that the move to shorter contracts post-2000 led to higher subsidy requirements, but this is conflated by the accompanying changes in contractual arrangements, not least moving from competition to negotiation. Overall, empirical evidence on the impact of contractual arrangements on costs is emerging, but often by indirect methods. There is scope for more direct modelling of the bidding process, but this is heavily constrained by the commercially confidential nature of the data.

## **6. Rail Futures**

Rail franchising has been recently reviewed by the House of Commons Transport Select Committee (HC66, 2017) which has questioned whether the franchising system is fit for purpose. It is noted the service reliability and punctuality, as measured by the Public Performance Measure (PPM), and customer satisfaction, as measured by the National Passenger Survey, have plateaued and/or are beginning to decline. There are concerns about the preponderance of direct awards and the fall in market interest in franchises. There is support for open access, although this would require a reform of track access charges and

the development of a Public Service Obligation levy. It is noted that little financial risk is transferred to the private sector in rail franchising and there is a preference for the procurement of longer and smaller franchises. There is concern over the relationship between Network Rail and passenger operations and the misalignment between control periods and the franchising schedule. There remain experiments with integrated operations for the Scotland, South Eastern and East Midlands franchises, despite the failure of the deep alliance on Network Rail's Wessex route (which ran from April 2012 to June 2015) and the limited up-take of the Route-level Efficiency Benefit Sharing Mechanism. There are proposals for the new East-West (Cambridge to Oxford) route to be developed as a virtually integrated concession. There seems to be some support for the notion that vertical separation has increased costs for Britain's relatively dense train operations (Mizutani et al., 2015). Doubts are expressed about the DfT's ability to procure seven franchises between 2017 and 2019, with a recommendation that monitoring and enforcement functions should be transferred to ORR. There are particular criticisms of the handling of the Thameslink, Southern and Great Northern franchise, where the franchisee is in dispute with the unions concerning the extension of driver only operation. There is particular concern over the use of force majeure provisions that mean that revenue losses of at least £38 million per year are met by public funds and of the ad-hoc revisions to the penalty thresholds. There is also concern of the scheduling of franchise competitions with, for example, the South Western franchise due to change hands in August 2017 just as the £800 million investment at Waterloo is likely to reach its peak in terms of disruption.

Unsurprisingly, the Government rejected the assertion that franchising is not fit for purpose (HC 1145, 2017). Although some recommendations concerning open access and remapping and re-specification of franchises were supported, criticisms of the DfT were rejected, with the creation of the Passenger Services Directorate in 2013 being supported by the Major Projects Authority and its achievements recognised by the National Audit Office (HC604, 2015).

The Competition and Markets Authority has examined four options for the passenger rail market (CMA, 2016). These are: significantly increased open access operations; two franchisees for each franchise; more overlapping franchises; and licensing multiple operations. Detailed modelling of the open access option for three lines (East Coast, Great Western and West Coast) suggested substantial benefits (PV of up to £1.7 billion over 20 years) – although these are relatively small compared to our estimate of the benefits of franchising over the last 20 years (see Table 2). Given the analysis above, we have doubts about the efficacy of overlapping franchises where these reduce economies of density and increase service heterogeneity. The CMA seems to have a preference for the licence system (Box 2, page 31), which seems to have echoes of Foster's view of the end game for rail privatisation (Foster, 1994), but there are acknowledged implementation issues.

Whereas the CMA is in effect calling for more private sector competition, an alternative view is for the re-nationalisation or de-privatisation of passenger rail (Taylor and Sloman, 2013), with estimates indicating that this could reduce transaction costs by as much as £1.2 billion per year. Given Network Rail is already in public ownership and was statistically re-classified as a nationalised industry in September 2014, taking the railways back into public ownership. As franchises come up for renewal or fail to meet their conditions, they are put into the hands of Directly Operated Railways who were perceived as doing a good job in running the East Coast Franchise (see, for example, Jupe, 2013). One complication is that the operator of last resort function was effectively privatised in 2015, to a consortium led by SNC Lavalin (formerly Interfleet Technology), whilst rolling stock would be more expensive to take into public ownership. Nonetheless, the Welsh Government are investigating the scope for setting up a not for dividend TOC (PPIW, 2016).

## 7. Conclusions

It is tempting to frame this review using the concept of regulatory cycles (Preston, 2001b, Gwilliam, 2008). Regulatory (and governance) failures of the publicly owned and controlled regime led to privatisation which in turn exhibited market failures which in turn leads to a return to forms of public ownership. Although this concept may have some applicability to the rail industry as a whole, it has less relevance to passenger operations. To paraphrase Jupe (2010), policy has been more of a muddle (and a meddle). New Labour's initial meddle (leading to Phase 2 of the franchising regime) was accompanied by a muddle in response to the Hatfield accident and the problematic implementation of the cap and collar regime and the subordinated loan facility (although both survive in different guises – the forecast revenue mechanism and parent company support, respectively). However, our welfare analysis indicates that this muddle has been broadly positive in its own terms, although different regimes may have been more beneficial for the rail industry as a whole – but that is for another paper. For the passenger rail market, we continue to argue that the next rounds of franchising might better reflect the mix between commercial and social franchises. 'Commercial' franchises (particularly for longer distance services) would involve longer lengths, looser specifications and remain net subsidy. Competition would be provided in the short run by open access operators and in the longer run by competition between classic and high speed rail. 'Social' franchises (short distance commuter and regional services) would have a shorter length (particularly if rolling stock is publicly procured), tighter specification (complete contracts) and be gross cost. Where feasible, there would be experimentation with vertical re-integration and with micro-franchises (building on the experience of the Caledonian Sleeper). For the moment, it seems sensible that the franchising wheels should keep on turning and the end of franchising is not yet in sight.

## Acknowledgement

An earlier version of this paper was presented to the Laboratoire Aménagement Economie Transports, Université Lumière Lyon 2 on 17 May 2017.

## References

- Alexandersson, G. and Hulten, S. (2007) *Competitive Tendering of Regional and Interregional Rail Services in Sweden*. In International Transport Forum, *Competitive Tendering of Rail Services*, 165-187.
- Alexandersson, G. (2009). Rail Privatization and Competitive Tendering in Europe. *Built Environment*, 35, 1, 43-58.
- Burton, G., Carrol, G., and Wall, S. (2002), *Quantitative Methods for Business and Economics*, 2nd edn. (Harlow: Pearson Education Ltd).
- Cm 8526 (2013) *Brown Review of the Rail Franchising Programme*. January.
- Competition and Markets Authority (2016) *Competition in passenger rail services in Great Britain. A policy document*. March.
- Cowie, J. (2009) The British Passenger Rail Privatisation: Conclusions on Subsidy and Efficiency from the First Round of Franchises. *Journal of Transport Economics and Policy*, 43, 1, 85-104.
- Domberger, S., Meadowcroft, S.A. and Thompson, D.J (1986) Competitive tendering and efficiency: The case of refuse collection. *Fiscal Studies*, 7, 69-87.

- Domberger, S. Meadowcroft, S.A. and Thompson, D.J. (1987) The impact of competitive tendering on the cost of hospital domestic services. *Fiscal Studies*, 8, 39-53.
- Ford, R. (2017) East Coast Franchise Renegotiation Inevitable. *Modern Railways*. August. 26- 29.
- Foster, C. (1994) *The Economics of Rail Privatisation* Centre for the Study of Regulated Industries. Discussion Paper 7. CIPFA, London.
- Gwilliam, K.M (2008) Bus transport. Is there a regulatory cycle? *Transportation Research A*, 42, 9, 1183-1194.
- HC 809 (2012) *Report of the Laidlaw Inquiry. Inquiry into the lessons learned for the Department for Transport from the InterCity West Coast Competition*.
- HC 604 (2015) *Department for Transport: Reform of the rail franchising programme*. National Audit Office, November.
- HC 66 (2017) *Rail Franchising*. House of Commons Transport Select Committee. Ninth Report of Session 2016-17. February.
- HC 1145 (2017) *Rail franchising: Government Response to the Committee's Ninth Report of Session 2016-17*. April.
- Jupe, R. (2010) A model or a policy muddle? An evaluation of rail franchising in the UK. *Public Money and Management*, 30, 6, 347-354.
- Jupe, R. (2013). New development: Going off the rails? Rail franchising after the cancellation of the West Coast franchise competition. *Public Money and Management*, 33, 5, 337-341.
- Knowles, R. (2004). Impacts of privatising Britain's passenger services – franchising, refranchising, and Ten Year Transport Plan targets. *Environment and Planning A*, 36, 2065-2087.
- Knowles R. (2013) Railway franchising in Great Britain and the effects of the 2008-2009 economic recession, *Environment and Planning A*, 45, 1, 197-216.
- Link, H. (2016) A Two-stage Efficiency Analysis of Rail Passenger Franchising in Germany. *Journal of Transport Economics and Policy*, 50, 1, 76-92.
- McAfee, R.P. and McMillan, J. (1987) Auctions and bidding, *Journal of Economic Literature*, 25, 699 - 738.
- McCartney, S and Stittle, J. (2011) 'Carry on up the east coast'— a case study in railway franchising. *Public Money and Management*, 31, 2, 123-130.
- Mizutani, F, Smith, A.S.J., Nash, C.A. and Uranishi, S (2015) Comparing the Costs of Vertical Separation, Integration, and Intermediate Organisational Structures in European and East Asian Railways. *Journal of Transport Economics and Policy*, 49, 3, 496-515.
- Müller, G. (2011) *Die Bedeutung von Liberalisierungs- und Regulierungsstrategien für die Entwicklung des Eisenbahnpersonenfernverkehrs in Deutschland, Großbritannien und Schweden*. WIK Diskussionsbeitrag.

[http://www.econbiz.de/archiv1/2010/141044\\_liberalisierung\\_regulierung\\_eisenbahnpersonenverkehr.pdf](http://www.econbiz.de/archiv1/2010/141044_liberalisierung_regulierung_eisenbahnpersonenverkehr.pdf).

Nash, C. and Smith, A. (2007) Passenger Rail Franchising – British experience. Paper presented at *Thredbo 10 Conference* (12-17 August 2007, Sydney), workshop C, 1-27.

Nash, C. and Smith, A. (2011) Britain. In Drew, J. and Ludewig, J. (Eds.) *Reforming Railways – Learning from Experience*. 89-101. Eurail Press, Hamburg.

Nash, C. A., Nilsson, J.E. and Link, H. (2013). Comparing three models for introduction of competition into railways. *Journal of Transport Economics and Policy*, Vol. 47, Part 2, May 2013, pp. 191-206.

ORR (Office of Rail Regulation) (2012) *Rail Finances. 2010/11 Annual Statistical Release*. January

ORR (Office of Rail Regulation) (2017) *Rail Finances. 2015/16 Annual Statistical Release*. February.

Pollitt, M. and Smith, A. (2002) The Restructuring and Privatisation of British Rail: Was it really that bad? *Fiscal Studies*, 23, 4, 463-502.

Preston, J. (2001a) Franchising and Re-franchising of Passenger Rail Services in Britain. *Transportation Research Record*, 1742, 1-9.

Preston, J. (2001b) An Overview of Public Transport Reforms in Great Britain and Forecasts for the Future. *International Journal of Transport Economics*, 26,1, 23-48.

Preston, J. (2005) *Tendering of Services*. In Button, K. and Hensher, D. (Eds) *Handbook of Transport Strategy, Policy and Institutions*. Elsevier, Oxford. 65-82.

Preston, J. (2008) A Review of Passenger Rail Franchising in Britain: 1996/7 – 2006/7. *Research in Transportation Economics*. 22, 71-77.

Preston, J and Robins, D. (2013) Evaluating the Long Term Impacts of Transport Policy: An Assessment of Rail Privatisation. *Research in Transportation Economics*, 39, 134-144.

Preston, J. (2017) Deja Vu All Over Again? Rail Franchising in Britain. *Research in Transportation Economics*. 59, 107-115.

Public Policy Institute for Wales (PPIW) (2016) *Not-for-Dividend Rail Service Provision*. PPIW, Cardiff.

Rasmussen, T., Wheat, P. and Smith, A. (2015) *Do open access train operators exhibit inherent cost benefits compared to their franchised counterparts?* Report to Competition and Markets Authority. July.

[https://assets.publishing.service.gov.uk/media/55a8cde240f0b6156000000b/Econometric\\_analysis\\_of\\_efficiencies.pdf](https://assets.publishing.service.gov.uk/media/55a8cde240f0b6156000000b/Econometric_analysis_of_efficiencies.pdf)

Smith, A., Nash, C., and Wheat, P. (2009). Passenger Rail Franchising in Britain: Has it been a success? *International Journal of Transport Economics*, 36, 1, 33–62.

Smith, A.S.J. and Wheat, P.E. (2012), Estimation of Cost Inefficiency in Panel Data Models with Firm Specific and Sub-Company Specific Effects. *Journal of Productivity Analysis*, 37, 27-40.

SORT-IT (1999) Joint Report on the Rail Case Study. Deliverable D6.

<http://www.its.leeds.ac.uk/projects/sort-it/index.htm>

Syarifuddin, S. (2016) *Overall Assessment of Rail Privatisation*. MSc Dissertation, Faculty of Engineering and the Environment. University of Southampton.

Taylor, I. and Sloman, L. (2013) Reunifying Britain's railways: obstacles and opportunities. *Public Money and Management*, 33, 5, 329-336.

Thompson, L. (2003). Changing railway structure and ownership: Is anything working? *Transport Reviews*, 23, 3, 311-355.

Van Dijk, H. (2007) *Tendering and decentralization of regional rail passenger services in the Netherlands (1997–2005)*. In International Transport Forum, Competitive Tendering of Rail Services, 127-137.

Wardman, M. (2006) Demand for rail travel and the effects of external factors. *Transportation Research Part E-Logistics and Transportation Review*, 42 (3), 129-48.

Wheat, P. E. and Smith A.S.J. (2015) Do the usual results of railway returns to scale and density hold in the case of heterogeneity in outputs? A hedonic cost function approach. *Journal of Transport Economics and Policy*.

Whelan, G., Harvey, A. and Cartmel, J (2010) A Time Series Analysis of Rail Demand in Great Britain. *European Transport Conference*.

Wilson, R. (1992) Strategic analysis of auctions. In Aumann, R. and Hart, S. (Eds) *Handbook of Game Theory with Economic Applications* (Amsterdam, North Holland).