Rail Partners

A Fork in the Tracks: Attracting customers back to the railway

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1. Introduction

Rail is critical to the success of the country – connecting communities, driving economic growth, and contributing to positive environmental outcomes. But, coming out of the pandemic, the railway is at a 'fork in the tracks'. The delay to rail reform legislation and wider financial challenges risk a spiral of decline. A focus solely on cost reduction will lead to reduced services and fewer people travelling by train. This would be a bad outcome for passengers and also for taxpayers funding the service. But there is an alternative: facilitating operator investment and innovation from the private sector to attract passengers, restore hundreds of millions in lost revenues and revive the post-pandemic railway.

Rail is part of our national fabric – driving economic activity by connecting people to jobs, businesses to their customers, goods to markets and communities to each other. A thriving and successful railway is a key tool at the government's disposal to help tackle the current economic challenges. As the UK navigates the tricky economic headwinds of high inflation and the cost of living crisis, we must seek to secure the economic growth rail can help to deliver across Britain's regions. And, as a lower carbon form of transport, rail also helps to deliver the government's sustainability objectives, air quality improvements and reduced congestion in towns and cities up and down the country. Where rail succeeds, so too do local economies and environments.

Right now, as it emerges from the pandemic, rail finds itself facing a significant financial hole. While fixed costs remain fairly constant, revenue recovery has plateaued at around 80% to 85% of pre-pandemic levels – with taxpayer support sitting at around £1.5bn to £2bn higher each year than before the virus hit.

Against the current economic backdrop, government is understandably looking for rail to make significant savings. The November fiscal statement set out the increasing pressures on limited public finances – it is clear that rail cannot take more than its fair share of taxpayer funds. We must rightly undertake reforms to reduce costs and thus taxpayer support to the railway.

But this is only half the story. The current approach adopted by the government to take out cost from the railway without fully considering the impact on customers and revenue will ultimately lead to sub-optimal outcomes: service cuts, that make the railway less attractive for passengers, meaning fewer people travelling, meaning lower revenues and further cost pressures, which in turn leads to more service cuts – a spiral of decline.

However, there is an alternative to attempting to close the financial gap through cost savings alone. Instead, we must look at both sides of the ledger – cost and revenue – together, and enable operators to focus on what they do best: attracting passengers and growing markets. This involves creating the right framework that facilitates private sector operators to innovate and to invest in initiatives to bring more passengers back to rail – which ultimately leads to services and jobs in the railway being protected. This approach is consistent with the direction of travel and specific proposals set out in the 'Plan for Rail' – and can be done almost immediately within the current contracts without legislation.

Independent analysis conducted for Rail Partners by the consultancy Oxera shows up to **£1.6 billion to £2.1 billion in revenue is potentially being missed over the next two years** because of the current inflexible contractual arrangements, that were required during the pandemic, but are no longer appropriate to continue to drive recovery.

This increased revenue would make a significant contribution to stretched public finances allowing Government to release more of taxpayers' money to be used on priorities, such as NHS backlogs. The main beneficiaries of such an increase in revenue would be the government and the taxpayer. A rejuvenated rail sector also means a boost to wider economic activity as well as a shift towards more people using a lower carbon and lower polluting form of transport to achieve net-zero goals.

This report sets out the limitations of the current contractual arrangements and why there needs to be a shift towards a greater focus on private sector innovation and investment to grow revenue. It details how Oxera have calculated the size of the additional contribution the railway could make to the public purse now.

It sets out four clear steps to reverse the trend of lost revenue:

1. **Activate and deploy mechanisms in National Rail Contracts** that facilitate operators to invest and innovate to accelerate revenue growth for the financial year 23/24 and beyond – providing the framework for chasing the additional revenue that is available.

2. **Provide operators with sufficient influence over commercial levers,** like timetabling, marketing and fares, to respond to new incentives and improve the offer to customers.

3. **Evolve the mechanisms for future Passenger Service Contracts** that are in keeping with the 'Plan for Rail's ambition of creating a spectrum of contracts with calibrated revenue incentives – ensuring future contracts are fit for purpose for different markets.

4. **Reunite cost and revenue** in the Department for Transport to avoid a sole focus on cost reduction that is negatively impacting the customer experience and revenue generation – ensuring holistic consideration is given to rail financial decisions.

The railway finds itself at a fork in the tracks – facing one of its most significant points of inflection since privatisation. It faces a fundamental question of how best to avoid decline and accelerate recovery. Delays to wider reform and legislation as well as a backdrop of industrial action compound these questions.

If we get it wrong, the railway faces a protracted hiatus, a stunted recovery from the pandemic and most likely a permanently smaller railway. If we get it right, the railway can return to growth and help the country do the same – with rail acting as a catalyst for economic growth and decarbonisation.

It is a shared responsibility to protect the railway's future and private sector operators have the necessary skills, expertise and resources to secure its future in partnership with the Department for Transport and ultimately Great British Railways.

We must act now to grow revenue and restore industry finances, to secure the future of this critical national asset – not for its own sake but for the wider benefits it delivers to the country.

2. Attracting more customers is key to avoiding decline

2.1 The system of contracts that ensured resilience in the pandemic is not sufficient to also drive recovery

At the start of the pandemic, and in response to the resulting decline in passenger numbers, Department for Transport (DfT) suspended its rail franchise agreements – stepping in to plug the financial gap to ensure services kept running to support key workers.

The government put in place Emergency Measures Agreements (EMAs), covering all lost revenue and operational costs; paying operators a pre-determined fee to run services – rightly turning off the drive for operators to attract passengers and revenue, allowing them to focus on the critical task of getting people where they needed to be at a time of national crisis.

When the EMAs expired after 6-months, the government introduced Emergency Recovery Measures Agreements (ERMAs) which lasted between 6 and 18-months. The terms were similar to EMAs; however, the total fee paid to operators reduced.

The majority of operators have now moved from ERMAs to National Rail Contracts (NRCs) which formally terminated pre-existing franchises. These are directly awarded bridging contracts until new Passenger Service Contracts (PSCs), a construct of the Government's wider reform proposals as set out in the 'Plan for Rail', are enacted.

NRCs place more responsibility for managing cost onto operators but there is still little commercial freedom or incentive to accelerate revenue growth – with operators having to seek permission from and navigate the bureaucracy of DfT and wider government to simply make small changes and introduce new services or deploy marketing campaigns. In contrast, Merseyrail and open access operators (Grand Central and Hull Trains), did not move to new contracts in the crisis, and now have more commercial freedom to attract customers back to rail in areas such as timetabling, marketing and fares yield management – and have evidenced faster and greater revenue recovery.

Operators are wholly supportive of the actions taken during the pandemic to shift the contractual model to support the industry. However, we must now look to evolve at pace to ensure operators can protect the long-term financial sustainability of the industry. The system and contracts that were rightly set up to get through the pandemic will not result in sufficient passenger and revenue growth to restabilise rail, leading to much higher subsidies than should be the case.

2.2 Revenues are plateauing and plugging the financial gap solely through cost savings could lead to a spiral of decline

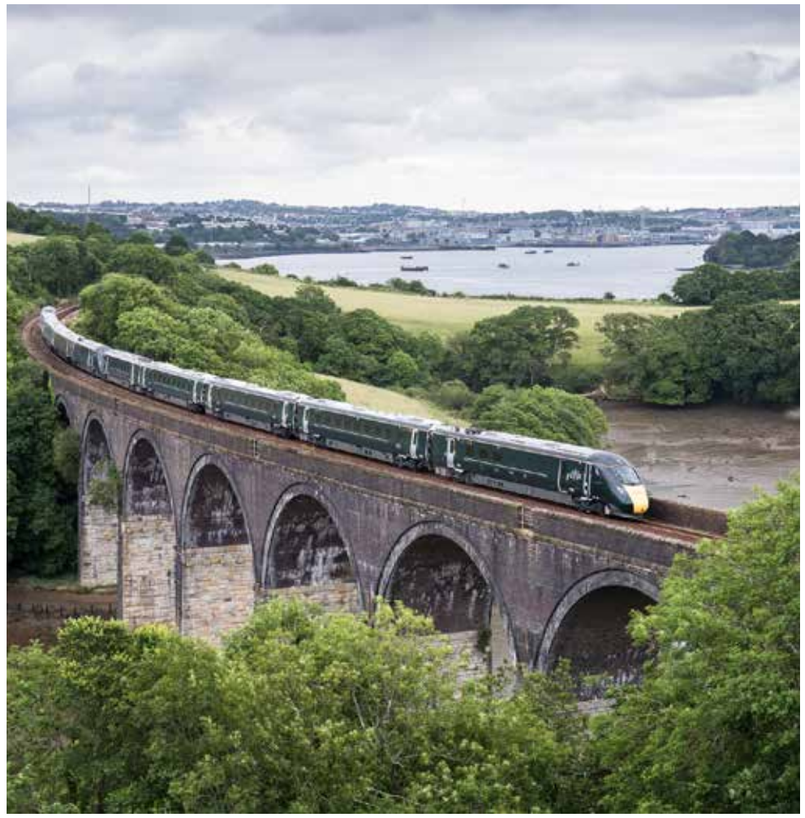
As pressures on the public purse grow, rail must not take more than its fair share of scarce public resources. Currently, taxpayer support for the railway is sitting at levels which are around £1.5bn to £2bn higher each year than before the pandemic – with revenues plateauing at around 80% to 85% of pre-pandemic levels. Rail cannot and should not compete with other vital services for higher taxpayer subsidy, but the answer cannot only be cost cutting measures. We have a window of opportunity to attract people back to rail and capture the economic and environmental benefits of a thriving railway.

Rail Partners supports the need to continue focusing on cost reduction and that appropriate incentives should be in place to support this – but progress on modernising working practices and improving productivity has been slow. While this will help significantly reduce the industry cost base, it will still not go far enough.

Presently, the existing contracts do not allow sufficient focus on the other side of the ledger – increasing revenue. For example, the situation under NRCs means that if an operator wants to run a targeted marketing campaign to drive revenue and passenger numbers where there is spare capacity, it has to ask for permission from DfT – which is often protracted and leads to missed opportunities to respond to customer needs.

Even when decisions are reviewed and a strong case for a return on investment is made, a focus on cost reduction currently overrides the opportunity to provide the additional funds needed to develop marketing campaigns or introduce services. Operators and owning groups have a willingness to invest their own funds in the right circumstances but there is no return available on this type of investment and no mechanism to do so.

Finally, the situation is further exacerbated by DfT covering railway costs and Treasury the revenue shortfall. Government, across departments, is not looking at the railway's financial position holistically. This creates perverse outcomes where DfT is encouraged to reduce marketing budgets to cut costs, which can have a disproportionate impact on passenger numbers and revenue arriving in the Treasury. These actions could even make the financial gap larger. No commercial business or business tasked with reducing its burden on the taxpayer would operate itself in this way.



The risk of a spiral of decline is real, where services could be reduced to cut costs, making the overall rail proposition less attractive, leading to stalled or lower passenger growth, meaning further cost pressures and further potential service reductions. Severe cost challenges for DfT and slow decision-making are damaging the ability of operators to grow revenue, making rail less attractive to passengers.

2.3 A greater focus on revenue growth is necessary to stabilise rail finances

The alternative is that operators are harnessed to invest and innovate to drive better customer outcomes and reduce reliance on taxpayer support. That is why we must evolve the contractual model to place sufficient focus on revenue growth and address the fact that NRCs provide no material ability or commercial framework to chase revenue.

A wide body of evidence over the last two decades shows that with the right framework, operators can play a critical role in influencing rail demand and, as a result, revenue. Giving operators the ability to drive revenue delivers economically efficient outcomes, improves the customer experience, and reduces the public subsidy.

The expertise, entrepreneurialism and agility of the private sector has played a vital role in transforming Britain's railway since the early 1990s, driving more than a doubling in passenger numbers and growing revenue at more than twice the rate of GDP. In addition, the 'Plan for Rail' rightly notes the importance of building revenue incentives into future contracts – ensuring that private sector capabilities and experience are fully utilised.

Independent analysis conducted for Rail Partners by Oxera shows the size of the prize – a potential additional £800m in revenue that is currently being missed each year. That is money that could be used to reduce taxpayer costs, with the pursuit of the additional revenue driving a better customer experience.

While franchising as a system had run its course even before the pandemic, the track record of the private sector across many aspects of the railway cannot be ignored – it is therefore critical to capture the best of that acumen, harness it appropriately so that the commercial expertise drives up revenue, avoids a spiral of decline and ultimately achieves the core objectives of the 'Plan for Rail' and proposed new system.

2.4 Better harnessing operator expertise will attract more passengers back to the railway

To achieve the change needed, Rail Partners has developed a framework with independent experts Oxera, which gives operators sufficient incentives, flexibility and freedom to do what they do best – innovate to attract customers back to the railway and accelerate regrowth.

This will require a rapid evolution of the contracts and processes put in place during the pandemic and recalibration for the changed realities that exist today. More freedom for operators, less bureaucracy and greater agility from DfT in its decision-making processes. It also requires decisions about costs and revenues to be brought back into one place, with DfT looking across both sides of the ledger to avoid a sole focus on cost saving decisions that disproportionately impact revenue and the customer experience.

Analysis by Oxera shows that giving greater flexibility and stronger incentives to operators to deliver for customers, results in significant revenue growth above current levels, helping to repair the industry's finances and support economic recovery.

Industry and government must take advantage of the options that are available without delay. This will not only mean responding better to customer needs and driving up patronage, it will also support net zero targets and levelling up and, in turn, free up vital public funds from subsidising the railways so they can be used on other key services.

3. The size of the prize is significant

3.1 Rail Partners commissioned independent analysis to quantify the impact of an evolved contractual framework on revenue

Under National Rail Contracts (NRCs), Department for Transport (DfT)-contracted operators have limited commercial flexibility and incentives to grow revenue. In contrast, open access operators (Grand Central and Hull Trains) and Merseyrail, have more commercial freedom to attract customers back to rail in areas such as timetabling, marketing and fares yield management. Despite Lumo's success in growing passenger numbers and encouraging modal shift from air to rail, it is not included in the analysis as it was not operating pre-pandemic and therefore there was insufficient data available.

Rail Partners asked Oxera to compare these operators with more commercial freedom to the contracted operators and those operated by the DfT – in order to analyse the impact that NRCs and its incentive framework has had on rail revenues since 2020 (at the start of Emergency Measures Agreements) and the potential loss of revenue in the future with NRCs in place. This analysis builds upon previous research undertaken by Rail Partners that showed the success of open access operators and Merseyrail emerging from the pandemic.[1]

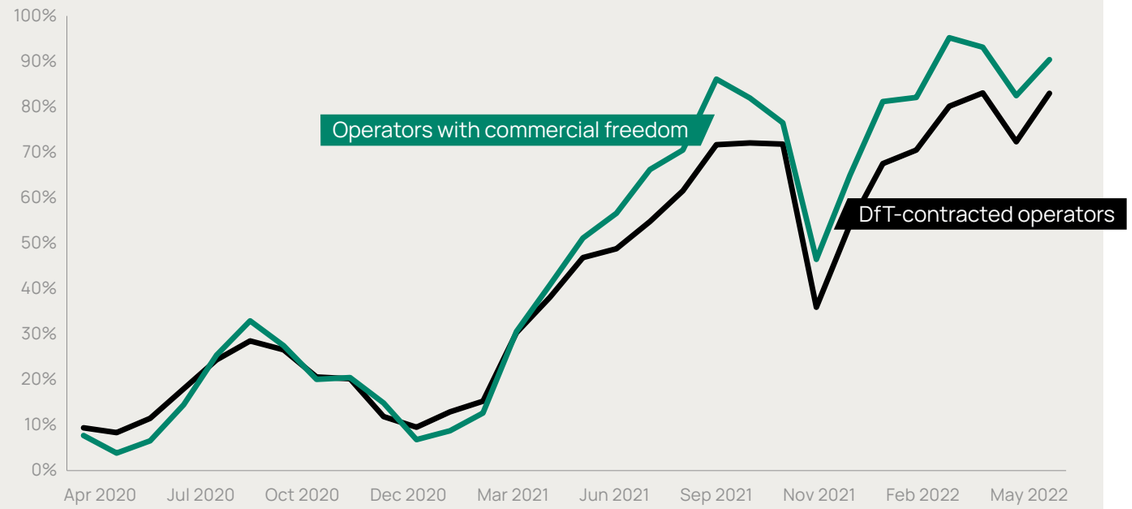
The analysis examined whether providing operators with a greater degree of flexibility materially affects revenues, whilst estimating the impact that the current contract structures, which provide limited flexibility to most operators, have had and will continue to have on rail industry revenues – more detail about the methodology and modelling can be found in the technical appendix.

[1] Rail Partners: Harnessing the commcerial expertise of the private sector: Link

3.2 Post-pandemic operators with commercial freedom and strong revenue incentives have regrown at a faster rate than DfT-contracted operators

Figure 1 shows that open access operators and Merseyrail (with control over levers such as timetabling, marketing and fares yield management) have grown revenue at a faster rate than 14 DfT-contracted operators following the lifting of lockdowns and now post-pandemic.

Figure 1: Revenues (as a proportion of 2019 revenue) for DfT-contracted operators (black line) vs operators with commercial freedom (green line)[2]



Although Figure 1 shows that operators with commercial freedom and strong revenue incentives have been able to grow revenues at a considerably faster rate than DfT-contracted counterparts, this evidence alone is insufficient to conclude that the commercial flexibility and incentives these operators have has driven the divergence in growth rates.

Demand for rail transport is influenced by multiple factors, not just the incentives and degree of commercial flexibility in different contract types. This includes endogenous factors such as the amount of services that operators run, and external economic factors such as population, earnings and the employment rate. Oxera's analysis controls for these factors (see technical appendix). The analysis also accounts for the significant unobserved impacts during this period, and includes time-specific factors that control for causes of variance in demand affecting all operators, such as the impact of lockdowns on operators.

[2] The figure represents the mean value of the revenues (as a proportion of its 2019 values) for DfT-contracted operators (in black) vs other commercially free operators (in green). DfT-contracted operators include Avanti West Coast, C2C, Chiltern Railways, Cross Country, East Midlands Railway, Great Western Railway, Greater Anglia, GTR, South Western Railway, TransPennine Express, West Midlands Trains, South-eastern, Northern and LNER. Operators with commercial freedom include Grand Central, Hull Trains, and Merseyrail. Lumo is not included as it was not operating pre-pandemic. Source: Oxera.

3.3 With the right freedoms DfT-contracted operators could be generating an additional £1.6 billion - £2.1 billion of revenue over the remaining two years of the Comprehensive Spending Review

Considering all of the factors, Oxera's analysis found that:

The degree of contractual flexibility available in rail contracts has a statistically significant impact on an operator's revenues.

Controlling for other factors, if DfT-contracted operators had the same degree of commercial flexibility as open access operators and Merseyrail, rail revenues would have been between £1.9bn and £2.2bn higher since April 2020.

If these impacts continue at the scale experienced from July 2021 to July 2022, it is estimated that lost revenue would equate to between £800m and £1.1bn per annum – which equates to £1.6bn and £2.1bn over the final two years of the current Comprehensive Spending Review.

All economic modelling of this kind has limitations. It should be noted that to make up the lower revenue shortfall figure of £1.6bn over two years assumes that DfT-contracted operators would have similar degrees of commercial freedom as Grand Central, Hull Trains and Merseyrail. The additional £600m to achieve the upper figure of £2.1bn over two years also assumes that DfT-contracted operators increase service levels to the same degree as the more commercially free operators relative to pre-pandemic levels. This additional amount is a gross revenue figure and does not include the additional costs associated with more services.

DfT's publicly run train operators, LNER, Northern and Southeastern are also included in this analysis but clearly do not have the same corporate financial incentives as private sector operators to respond to having stronger revenue incentives and greater commercial freedom. Only if these contracts were competed either as NRCs or as new Passenger Service Contracts would we expect the same level of revenue growth to be achieved.

If appropriate incentives to grow revenue are included in NRCs, the £1.6bn increase over two years in revenue could still only be realised if sufficient flexibility around drivers of demand such as timetabling, fares and marketing are provided to operators. Moreover cuts to services to meet reduced budgets would further reduce operators' ability to deliver increased revenue.

Noting the caveats, a conservative target of 50%, a realistic potential for DfT-contracted operators, would still equate to a very significant £800m to £1.1 billion of extra revenue over the final two years of the spending review period.

Clearly, the independent analysis by Oxera demonstrates the importance of activating revenue incentives in NRCs as soon as possible and providing operators with the ability to respond to the needs of customers and drive revenue. The absence of both commercial freedoms for DfT-contracted operators and powerful incentives to grow revenue is adversely affecting the industry's finances and the customer experience through an inability to respond to customer need.

The potential increase in revenue outlined in this section would make a huge contribution to the currently stretched public finances. This could both reduce subsidy and offset any additional costs of further restoring rail services. Reducing rail subsidy means public resources – taxpayers' money – can be used on other priorities such as NHS backlogs as a result of the pandemic.

Further, restoring rail services does not just mean a rejuvenated rail sector, it means a boost to wider economic activity through improved connectivity of people to jobs and businesses to their customers. It also means more people using a lower polluting and lower carbon form of transport contributing to both the government's net-zero goals and improved air quality.

> "£800m of increased revenue would make a huge contribution to currently stretched public finances."

4. Revenue incentives and greater commercial freedom can be activated almost immediately

4.1 Dormant provisions already exist in current contracts to harness the commercial expertise of operators and accelerate revenue recovery

While Rail Partners supports the inclusion of revenue incentives in future Passenger Service Contracts (PSCs), the development and introduction of these contracts will not be immediate. Businesses participated in a PSC market engagement day over a year ago which is yet to produce an output, and legislation to create Great British Railways is delayed – the client body intended to let PSCs. The challenge facing industry is not going away and given it will take some time for the first PSC to be offered to the market through a competitive process – this section focuses initially on what can be achieved in the current National Rail Contracts (NRCs).

Provisions already exist in NRCs to develop and agree revenue incentives. Doing so would encourage operators to innovate to attract more customers back to the railway and invest their own capital in areas such as marketing campaigns where there is a likely return on investment. The provisions could be activated almost immediately.

Rail Partners has explored different revenue incentive mechanisms with Oxera for use in NRCs, looking at ways of minimising perverse outcomes and avoiding overcompensation in order to ensure value for money for the taxpayer. Overall, the approach used to incentivise revenue growth must be tailored to the specific contract in question – considering two important factors.

1

First, the type of rail market in question can influence the design of the contract, and the specific revenue incentives embedded within it. For example, where contracts cover commuter-heavy flows, there may be less scope for operators to generate endogenous revenue growth in the peak. In these circumstances, targeted revenue incentives could be applied to encourage the operator to grow revenue where possible such as in the off-peak (although post-pandemic, the commuter market has become more elastic as many people can choose to work from home so revenue growth through attracting more commuters is also possible). Meanwhile, for contracts covering long-distance routes, the high levels of discretionary travel provide greater scope for operators to grow demand and revenue. Finally, many segments of the network will lie somewhere between these points; these are referred to as 'mixed markets'.

2

Secondly, the degree of operational and commercial flexibility available to the operator will also significantly influence the nature of the revenue incentive that should be applied. More specifically, where operators have greater discretion regarding the services they decide to provide, or over fares and marketing, there will be greater opportunity to grow revenue.

4.2 The current NRC scorecard mechanism and quantified target measures will not achieve the pace of change needed

When considering options with Oxera for revenue incentives in NRCs, we explored adjusting the existing 'scorecard' and 'quantified target measures', that are currently the basis for assessing operator performance, through providing greater weight to revenue growth. However, this was rejected as a viable option for the following reason.

The maximum fee available in most NRCs is 2.0% (in some cases lower) of the operator's cost base, typically split between a 0.5% fixed fee and 1.5% performance-based fee. The performance-based fee is assessed and broken down by four to five separate criteria, one of which is financial performance. The financial performance component is then made up of two or three sub-components , one of which relates to revenue performance. This means that the maximum amount which a train operating company (TOC) could earn on the financial performance is one element (out of four or five) of the performance-based fee, which is then reduced further between up to three other sub-components. This is a very small element of the overall performance-based fee, which fails to meaningfully drive what it seeks to achieve, incentivising revenue growth. Even adjusting the weightings for the different performance components and within the financial performance component is unlikely to strengthen the revenue growth incentive significantly.

We believe a simple mechanism separate to the scorecard and quantified target measures would be more effective. A revenue target would be set and if the operator achieves revenues above the target, it receives a share up to a cap. The share would need to be carefully calibrated, but we would expect Government to receive the majority of the revenue upside, certainly over time – with the operator outlining to Department for Transport (DfT) the initiatives it has undertaken to generate more revenue.

The very low margins in NRCs means there is very limited capacity for TOCs to absorb downside revenue risk. However, TOCs and their owning groups could take risk by expending resource and investing in things such as marketing campaigns.

4.3 Different types of revenue incentive mechanisms could be considered for different markets

Following analysis of a number of potential revenue incentive mechanisms, three should be considered for NRCs based either on incentivising growth in total revenues for an operator or partial revenues, depending on the type of market/contract and the degree of commercial freedom provided to operators – with the main beneficiary being the taxpayer. The three types of revenue incentives that could be utilised in NRCs are:

I. A mechanism based on the TOCs entire revenue base – full revenue incentive (mainly long-distance markets)

This option would place an incentive across the entire revenue base covered by the contract. This approach would provide the strongest incentives to grow revenue. It would likely be most suitable for long-distance, inter-city markets where there exists a high-level of discretionary travel. However, it could also be suitable for commuter and mixed markets if there exists the commercial freedom to respond to the incentives across the entirety of the revenue base.

II. A mechanism based on the revenue of particular flows – flow-based partial revenue incentive (mainly commuter and mixed markets)

This option would apply the incentive only to a segment of the overall revenue base, covering certain specific flows. This could be applied to flows where the TOC proposes it has the greatest chance of driving revenue growth. It might be best suited to long-distance elements of mixed markets or specific flows in commuter markets.

III. A mechanism based on the revenue over a time period – time-based partial revenue incentive (mainly commuter and mixed markets)

This option would apply the incentive over the entire revenue base, but only within certain timeframes of the week (e.g. weekends or off-peak weekdays). This option might be appropriate for commuter markets (including commuter elements of mixed markets), where there is less scope for optimising use of capacity on weekdays (particularly at peak times), but potentially greater scope for delivering additional or improved services on weekends or during the weekday off-peaks.

These are not rigid recommendations but options to be considered. Consideration should be given to the appropriate incentive mechanism(s) for each operator contract along with the right calibration of the incentives.

In some instances, for example, it could be more effective to deploy marketing campaigns and discounted products to attract back commuters or spread commuter demand more evenly during the week – therefore an incentive across an entire commuter market revenue base might be appropriate.

4.4 Revenue incentives are meaningless without the ability to respond to them

Crucially, for any revenue incentive to be meaningful, and for taxpayers to gain the benefits of reduced funding for the railway and passengers to recieve an improved customer experience, operators will need the ability to respond to the incentive.

It is acknowledged that there will be less flexibility in more tightly specified commuter markets where greater control is desired by clients specifying contracts. In such circumstances where DfT will want to retain greater control, it will be important for the Department to make rapid decisions to an operator's suggested initiatives.

Examples of commercial levers include the ability to:

Recommend to DfT or have the freedom to adjust fares, which will (to a greater or lesser extent) be controlled by fares regulation. The tighter DfT's direct control, or control through fares regulation, the lesser the ability to respond dynamically and undertake yield management to spread demand and maximise revenue in response to revenue incentives

Recommend to DfT or have the freedom to adjust the timetable or introduce additional services in response to revenue incentives

Control the level of and direct marketing spend on initiatives that attract more passengers to the railway. Given their proximity to passengers, TOCs are best placed to understand passengers' preferences and the opportunities to maximise revenue from marketing

4.5 Cost reduction incentives need to be combined with revenue incentives

Although the focus of this paper is on growing revenue, this must be combined with strong incentives for operators to improve efficiency and reduce cost. It is only by focusing on both sides of the financial ledger that we will return to a financially sustainable railway to continue to support economic growth.

The NRCs already have a provision for operators to propose initiatives, over and above business as usual cost efficiencies, to reduce costs more significantly. Whilst this is welcome, a simpler mechanism whereby operators receive a share of cost savings above an agreed baseline would be very powerful.

4.6 In the future, Passenger Service Contracts should be setup to better harness innovation and commercial expertise

In line with the 'Plan for Rail', Passenger Service Contracts (PSCs) are expected to be competed and offer more commercial freedom to operators serving long-distance markets, and to operators serving some elements of mixed markets – in areas such as timetabling, fares and marketing within a framework set by Great British Railways.

Commuter operators, operating under more tightly specified concessions, are expected to have less commercial freedom, although there should still be opportunities to introduce more flexibility than these operators have under NRCs—for example, in relation to off-peak yield management, marketing and the wider customer service offer.

For future PSCs, Rail Partners recommend that the following approaches are considered in different markets:

I. A mechanism based on total revenue, or the revenue of particular flows or particular times – full or partial revenue incentive (mainly commuter or mixed markets)

For commuter market (concession) or mixed market PSCs, it is likely that revenue incentives would be similar to those we propose above for NRCs, that is, a share of revenue growth above a target. Given the lower commercial flexibility expected in these contracts and fewer opportunities for operators to drive revenue growth, we expect these contracts to contain no revenue risk unless there are sufficient commercial levers to respond. As with our proposals for NRCs, the incentives could be targeted on subsets of revenue where operators have the greatest ability to influence revenue growth.

II. A mechanism based on both revenue risk and reward – full revenue incentive (long-distance and mixed market but potentially with scope for some commuter markets)

For long-distance markets and elements of mixed-markets with a high degree of discretionary travel where there would be more opportunities for operators to drive revenue growth, a more direct form of capped revenue risk and reward would be appropriate (assuming sufficient commercial freedom to respond).

Contracts for these markets could contain what is known as the 'Forecast Revenue Mechanism' (FRM). This was introduced by DfT towards the end of franchising and is similar to 'cap and collar' arrangements that were included in earlier franchises. Under the FRM mechanism, operators would keep all revenue above a baseline up to a cap and would take all revenue risk down to a floor. The cap and floor levels would need to be carefully calibrated so that excessive parent company support would not be required and significant risk premiums would not be included in contract bids. Periodic revenue baseline resets could be also be included to help address this. This would also protect the taxpayer's interest by preventing excess rewards.

If there was sufficient commercial freedom, this mechanism could also be considered for commuter markets, particularly given the greater discretionary element of travel post-pandemic.

Even with these type of contracts, if significant infrastructure upgrades are planned which make it more difficult to forecast revenue over the life of the contract, transferring revenue risk would not be appropriate. In these circumstances it might still be desirable to provide operators with upside revenue incentives but with periodic forecast revenue resets given the high degree of uncertainty over future revenue. Conversely, there might be opportunities in the future under PSCs to explore and introduce contracts that offer greater levels of cost and revenue risk.

In summary, for both NRCs and PSCs, the commercial freedom offered by a contract and the revenue potential fall along a spectrum, rather than falling into binary categories. Nevertheless, the framework outlined above for different contracts and different markets provides a useful starting point for DfT (and in the future, Great British Railways) to consider the available options when deciding how best to incentivise operators to grow revenue.

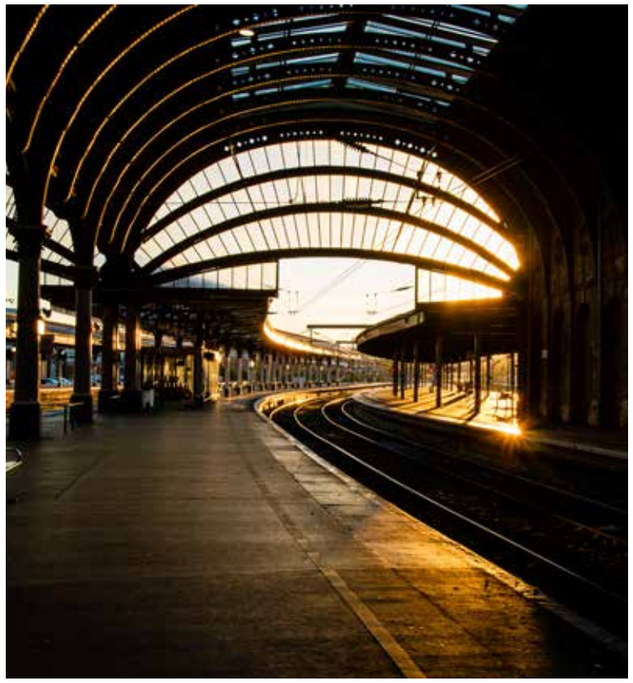
In applying this framework, it is recognised that careful consideration and detailed analysis will be required to calibrate a revenue incentive option to the specific circumstances of an operator. But the size of the prize is worth the time and effort, given the opportunity to attract more customers to the railway and reduce the burden on taxpayers.

5. Conclusions and recommendations

5.1 The prize is a more responsive and customer focused railway, with the taxpayer bearing less cost

In the context of wider fiscal challenges, demands on public finances are high and rail cannot take more than its fair share. Taxpayer support for the railway is still around £1.5bn to £2bn higher each year than before the pandemic – with revenues now plateauing at around 80% to 85% of pre-pandemic levels.

The railway is at a fork in the tracks, facing a range of challenges: how best to avoid decline, accelerate recovery, reduce costs, and adapt to changing customer needs. This report and independent analysis by Oxera demonstrates that National Rail Contracts, which lack material incentives for operators to invest and innovate to grow passenger revenues, combined with a strong focus from the DfT on gross cost minimisation, have led to significant missed opportunities and potentially increased net costs to the UK taxpayer in running the railways.



5.2 Rail Partners have set out four clear steps to reverse this trend:

1. Activate and deploy mechanisms in National Rail Contracts that facilitate operators to invest and innovate to accelerate revenue growth for the financial year 23/24 and beyond – providing the framework for chasing the additional revenue that is available.

2. Provide operators with sufficient influence over commercial levers, like timetabling, marketing and fares, to respond to new incentives and improve the offer to customers.

3. Evolve the mechanisms in future Passenger Service Contracts that are in keeping with the 'Plan for Rail's ambition of creating a spectrum of contracts with calibrated revenue incentives – ensuring future contracts are fit for purpose for different markets.

4. Reunite cost and revenue in the Department for Transport to avoid a sole focus on cost reduction that is negatively impacting the customer experience and revenue generation – ensuring holistic consideration is given to rail financial decisions.

These measures will help to target the £800m of revenue that, according to independent analysis by Oxera. is being lost each year when comparing DfT contracted operators to open access operators (Hull Trains and Grand Central) and Merseyrail.

By refocusing on revenue growth, private sector operators, with appropriate commercial freedom, can help close the gap in rail finances which will in turn free up vital public funds to support other key services during a fiscally challenging period and making rail more attractive post-pandemic– helping to achieve net zero, level-up local communities and drive economic growth.

Strong cost efficiency incentives would complement revenue incentives to bring the rail industry back to a financially sustainable position, enabling a growing railway to support economic growth and government's environmental and levelling-up objectives.

Technical Appendix – produced by Oxera

Our analysis followed the steps below.

1 Collect data, express as a proportion of pre-pandemic value

a. Base revenue for each of the train operating companies (TOCs) is divided by the 2019 equivalent value (mean of 2019 calendar year).

b. Base planned service for each of the TOCs is divided by the 2019 equivalent value (mean of 2019 calendar year).

c. Collect population, earnings, and employment data from the Office of National Statistics ('ONS') at NUTS1 level.[3] Rebase these numbers by dividing through by their 2019 equivalent value (mean of 2019 calendar year).

d. Merge the demographic data by each region with the revenue and planned services by each TOCs. To merge the data set, calculate the average of population, earnings, and employment rate across the regions through which each TOC operates.

e. Create a binary variable "contract type" categorising each TOC as 1) DfT-contracted or DfT operated, or 2) as having commercial freedom. The TOCs included in each catergory are listed in the 'scenario with 14 TOCs' in Table 2.

[3] ONS (2020), Population projections for regions, accessed on 07 Oct 2022.
ONS (2021), Earnings and hours worked, region by occupation by four-digit SOC: ASHE Table 15, accessed on 07 Oct 2022.
ONS (2022), Regional labour market: Headline Labour Force Survey indicators for all regions, accessed on 07 Oct 2022.

2 Select a model for explaining revenue variation, and estimate the impact of having a contract with commercial freedom on revenues

a. The model has revenue as the dependent variable, and the planned services, population, earnings, employment rate, and rail period fixed effect as the independent variables

b. Estimate the model, and analyse the estimates.

3 Predict the revenue in a counterfactual environment where DfT-contracted TOCs were to operate with commercial freedom

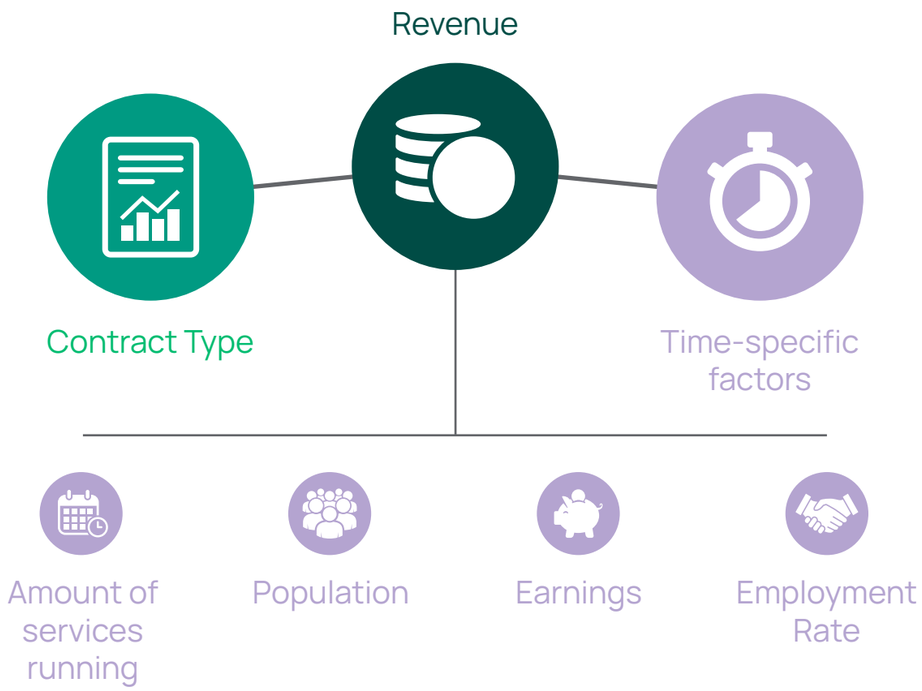
a. Predict the revenues for the DfT-contracted TOCs using the estimated model above, which we call the 'predicted' values.

b. Change the contract categorisation type to commercially free type, which we call the 'counterfactual' values.

c. To estimate the revenue difference, subtract 'predicted' values from the 'counterfactual' values.

Selecting a model for explaining revenue variation

Rail revenues are influenced by multiple factors. To isolate the impact of contract type on revenues, it is crucial to control for these factors. In addition to the available data impacting revenue (e.g., planned services, employment rate, and population), we take advantage of the panel structure of the available data (data over time and across TOCs), and control for time-specific fixed effect factors.



The fixed-effects regression model estimates the impact of each of these variables on revenue. Table 1 summarises the results from the (time-specific) fixed effects regression.

Table 1: Regression results

VARIABLES	Revenue
Planned services	0.272***
Employment rate	-2.051***
Earnings	-0.524
Population	-17.41***
Contract with commercial freedom	0.0833***
Time FE	YES
Observations	420
R-squared	0.962
*** p<0.01, ** p<0.05, * p<0.1	

Note: The regression uses data collected by following the steps laid out at the beginning of this appendix. Source: Oxera

The model finds that having a contract with commercial freedom has statistically significant and positive impact on revenue (p-value for the free contract variable is less than 0.01 and positive). In other words, having a contract with commercial freedom increases revenue, everything else equal. This model fits the data quite closely, as seen in Figure 2 below.

Figure 2: Model fit – aggregate revenue of 14 DfT TOCs (£m) per rail period

Note: A point in the line represents the aggregate revenues across the 14 DfT TOCs at each rail period. Dark green line represents the revenue values from the data, and the light green line represents the predicted revenue values calculated or fitted from the model. Source: Oxera.

Results

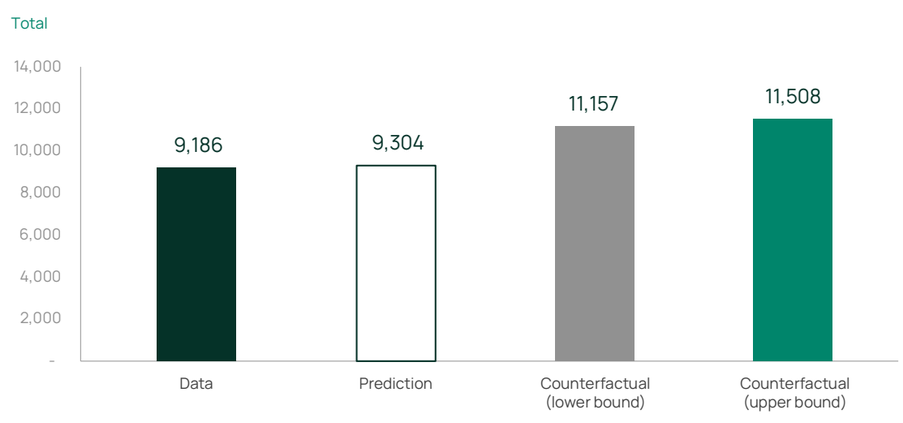
To calculate the extent of the impact of having a commercially free contract, we follow the steps listed below. Figure 4 visualises these steps.

1. For each TOC for each rail period, we calculate the predicted revenue resulting from the model and compare it with observed data.

2. We then predict revenue using a counterfactual scenario where DfT-contracted TOCs operate in a commercially-free environment, leaving every other variable equal. We call this a lower bound.

3. If DfT-contracted TOCs had more commercial freedom, they would also have more freedom to increase services during the COVID recovery if they are deemed to be profitable. Since the model controls for the planned services separately, we also simulate a scenario where DfT TOCs are allowed to increase their services up to the 2019 proportion of commercially free TOCs at each period, capped at the full operation level assumed to be at 2019 level. We call this an upper bound, since our analysis does not take into account costs, and we recognise that some of these reintroduced services may not be profitable.

Figure 3: Total revenue of 14 DfT TOCs (£m) from 2021/P01 to 2023/P04



Note: Each bar represents sum of revenues (data or predicted) across 14 TOCs across the estimation period which are from 2021/P01 to 2023/P04. Source: Oxera.

We calculate the revenue difference between:

- the revenue estimated in a counterfactual scenario of DfT TOCs operating as commercially free; and
- the predicted revenue under the DfT-contracted environment.

Such calculated differences are estimated for each rail period, and summed over the entire period we are studying (i.e. 2020/P01 to 2023/P04, or roughly April 2020 to July 2022). During these periods, the revenue difference (or foregone revenue) is estimated to be between £1.9bn to £2.2bn. The lower bound (£1.9bn) is the difference between the counterfactual lower bound in grey compared to the prediction estimate in white in Figure 4, and the upper bound (£2.2bn) is the difference between the counterfactual upper bound in green and the prediction estimate in white. If these impacts continue at the scale experienced from July 2021 to July 2022, it is estimated that lost revenue would equate to between £800m and £1.1bn per annum which equates to £1.6bn and £2.1bn over the final two years of the current Comprehensive Spending Review.

Model considerations

This section sets out some considerations regarding the results; the selection of independent variables in the model and highlights areas that could be explored for further research.

One may note that population, earnings, and employment rate are all negatively correlated with the revenue, which all things being equal would not be expected.[4] However, there is almost no variation in these demographic variables from April 2020 to July 2022. Hence, the impact that these coefficients have is very limited. A robustness check was undertaken by running the regression model excluding these demographic variables. The results are similar in coefficient values (the coefficient on commercial freedom is 0.09 compared to 0.08, so the effect is slightly stronger when excluding the demographic variables). Moreover, the contract type variable is statistically significant in both models. Controlling for demographic variables therefore results in more conservative estimates of the impact of contract type on revenue, and therefore use the result controlling for the demographic factors.

Revenue is impacted by factors other than the three demographic variables that are listed. For example, the rail demand (revenue) can be impacted by the rise in car fuel prices in recent months or COVID-19 lockdown restrictions. If the impacts are the same across all TOCs in a given rail period, our time fixed-effects model controls for those factors. However, if the fuel price rise has differential impacts on different TOCs, the model would not be able to control for those, and it would need additional data that is TOC-specific to its area of the country.

Since contract type is controlled for, which is defined at the TOC level, TOC-specific fixed effects are not controlled for. From a mathematical perspective, the contract type categorisation and TOC fixed effects are linearly dependent. Hence, to avoid mixing up the impact of TOC-specific effects with the contract type-specific effect of interest, it was decided to opt out from controlling for TOC-specific fixed effects. If one wants to isolate the TOC-specific factors such as a marketing budget, or competence of the management team, data on such variables would be needed for each TOC.

There may be endogeneity with the supply (planned services) and the demand (revenue). In other words, the revenue may impact the planned services variable. Since many of the DfT-contracted TOCs had mandatory service requirements, and limited flexibility over which services they ran, we think that there is limited scope for endogeneity. It is possible that even with commercial flexibility, the DfT-contracted TOCs may have less scope to increase services when taking into account the marginal cost of running those additional services. Therefore, it is noted that the upper-bound estimates (which uses the coefficient for the planned variable when estimating the counterfactual) may be an overestimate.

Moreover, there could be some secondary impacts due to the contract type changes that are not able to be accounted for. For example, due to the contract type changes, the productivity of the management team might change, and/or the TOC may be more or less able to respond to changes in demand, but the model is not able to capture these effects, to the extent that these effects are not seen in the data.

Finally, the model is run between April 2020 to July 2022. For a further robustness check, the regression also ran from 2021/P12 (roughly January 2021). Finding that the coefficient for contracting with commercially free option is still statistically significant and positive, but the magnitude reduces slightly (0.0765 compared to 0.0833).

[4] The Passenger Demand Forecasting Handbook based on numerous studies recommends a positive relationship between these variables and rail demand (and therefore revenue). However, this analysis includes time period fixed effects, which are likely to also pick up some of the relationship between these variables and rail demand.

Scenario

To evaluate the impact of contract type, we examine the fourteen TOCs that are DfT contracted or DfT operated, and three TOCs which have more commercial freedom. We find that the coefficient for the commercial freedom variable is statistically significant and positive.

Table 2: List of TOCs and their contract types for each scenario

	Contracted with/operated by the DfT	Operating with commercial freedom
Scenario with 14 TOCs	Avanti West Coast	Grand Central
	c2c	Hull Trains
	Chiltern Railways	Merseyrail
	Cross Country	
	East Midlands Railway	
	Great Western Railway	
	Greater Anglia	
	GTR	
	South Western Railway	
	TransPennine Express	
	West Midlands Trains	
	London North Eastern Railway	
	Northern	
	Southeastern	

Rail Partners

contactus@railpartners.co.uk
1 Northumberland Avenue,
London, WC2N 5BW
www.railpartners.co.uk